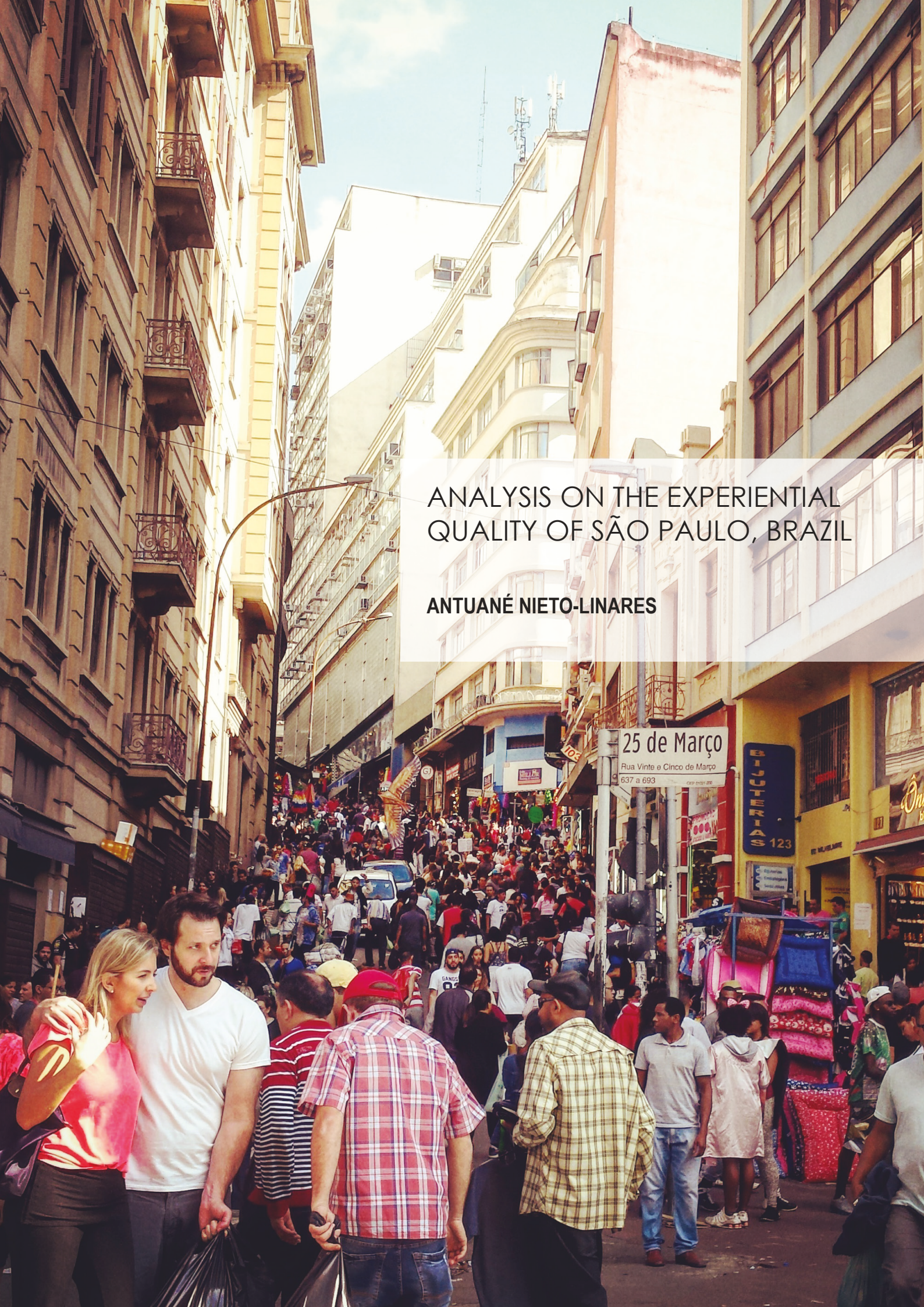

ANALYSIS ON THE EXPERIENTIAL QUALITY OF SÃO PAULO, BRAZIL

ANTUANÉ NIETO-LINARES

COVER FRONT | Street 25 De Março,
Centro Neighbourhood (SP) (Author, 2017)

COVER BACK | Interviewee's Avatars (Author, 2019)

ANALYSIS ON THE EXPERIENTIAL QUALITY OF SÃO PAULO, BRAZIL

ANTUANÉ NIETO-LINARES

DEPARTMENT OF ARCHITECTURE
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Abstract

This qualitative research study analyses individual city experiences in relation to macro-issues (i.e.: societal, economic, land use and transportation development) in the context of São Paulo (Brazil) as a global city. The aim is to explore a possible interdependency between the macro- and micro-dynamics (i.e.: quality of urban spaces in relation to user's experience) of the city. Methodology involves a combination of quantitative and qualitative methods, where the former is used to assess macro-issues in the city while the latter is used to address micro-issues (i.e.: the experience of urban spaces). Quantitative data collection involves Geographic Information Systems (GIS) and statistics while qualitative data is based in the participation of six individuals living in São Paulo. Participants documented their journeys through pictures and subsequent semi structured interviews explored their perception of the built environment. Information gathered from the participants is analysed via journey mapping and photo referencing. Results address the quality of urban spaces that is missing from the quantitative macro-analyses. Ultimately, both sets of data are combined to establish a possible interdependency between outer factors shaping macro- and micro-environments. Critique on existing urban typologies in São Paulo is made for further evidencing the lack of sensitive and inclusive design solutions in the city. This approach further anchors the relation between citizens and the built environment as it provides insights for the experiential quality of urban spaces. This study aims to contribute to the field of urban planning for development that is relatable to societal values as a way of improving people's well-being in an urban context.

Keywords accessibility, mobility, São Paulo, urban experience, well-being

ACKNOWLEDGEMENTS

"But no one –or almost no one- wants to renounce to the city… to live in it became a right, a right to enjoy the benefits of civilization, to rejoice on well-being and consumption, maybe the right to dive into and exciting type of alienation"
(Romero, 2009, p. 364).

"Mas ninguém —ou quase ninguém— quis nem quer renunciar à cidade… Viver nela se transformou em um direito, o direito de desfrutar dos benefícios da civilização, de gozar do bem estar e do consumo, quiçá o direito de submergir em um determinado estilo excitante de alienação" (Romero, 2009, p. 364).

This thesis was inspired by the richness experienced in global cities such as São Paulo. In the hopes of capturing the cultural value found in people the research was driven by curiosity, experimentation and openness. The above quote was quite central to the context of Brazil. Quite often in South America city services and infrastructure are developed exclusively for cities that generate the most economic output, creating a gravitational pull towards such cities. São Paulo is an example of the "benefits of civilization" in a South American context. I believe as architects and urban planners it is important to bring forward values that embrace cultural development and well-being. This is an opportunity to see people as a resource for development and as an intrinsic tool for making resilient cities.

I would like to thank my family and friends who in their own way have supported me throughout this process, specially Omar Velazquez Martinez who sat with me countless hours to listen and advice me on how to move forward.

Muito obrigada aquelas pessoas que compartilharam suas experiências comigo durante minha estadia no Brasil e aquelas que contribuíram com esta tese. Vocês são pessoas incríveis! Obrigada por ter me ensinado outras maneiras de ver o mundo.

TABLE OF CONTENTS

TABLE OF FIGURES

1 | INTRODUCTION

1 | INTRODUCTION

1.1 | THE IMPERSONAL CITY

One common issue with urban planning strategies is the "one size fits all" approach where over-rationalistic solutions result in impersonal spaces often destroying cultural meanings. The development of the built environment should be selective, rather than trying to solve all problems at once (Rebernik, Goličnik Marušić, Bahillo, & Osaba, 2018, p. 197) and for this it is imperative to analyse urban issues at different scales where planners can address quality as part of the user's experience. Combining qualitative and quantitative sources can provide planners valuable data in terms of the quality of the urban space, which is lacking from conventional statistical research (ex.: surveys). Developing more sustainable and liveable cities involve methodologies that embrace experiences from those actively using the spaces (ex.: combined methods approach). On the same token, transit spaces can arguably be people's most immediate encounter with public space and by extension, city living. This perspective brings forth the importance of understanding user experience affected by cities that are constantly shaped by huge outer forces. Hence the following research question:

(How does the development of global cities affect the experience of urban space?)

Functionality and Over Rationalization

After WWII many architects brought forward modernist ideologies to the Americas where countries were ready to embrace progress through economic and urban growth. Austerity and functionality envisioned for cities resonated with the fast paced performance of the industrial revolution. Modernism became a way to streamline a solution to rapid urbanization at the time. Eventually, disproportionate emphasis on functionality and production magnified the lack of attention to the human scale. Cities were no longer evolving from organic cultural development but rigid functional values. Architecture was not designed for the user but for performance. The trend architectural schools followed for decades headed towards a complete ignorance of contextual importance (ex.: appreciation for local values). Through this rationale, something projected in paper could go anywhere in the planet.

Materializations of wide spread modernist ideologies following WWII can be appreciated all over the world but few can match the impeccable example of Brasília (Brazil). Lúcio Costa and Oscar Niemeyer together won the project of designing the new capital city of Brazil in 1956. Their visions were an extension of Corbusier's "Charter of Athens" (1941) for a functional and organic city. Brasília was designed for embracing progress as perceived by the values of the industrial revolution. It was a city born from a symbol where cultural appropriation and development was much absent during its inception and execution (Pereira, 1992, p. 24)[1]. In 1987, Brasilia was designated as world heritage in light of its undeniable fidelity to urban and architectural Modernism (UNESCO World Heritage Centre, 1987).

1 In her text, Pereira goes into detail about how Brasilia became associated with progress and civilization regardless of the historical disconnect hence causing societal acceptance from Brazilians. Brasilia emerged like an "oasis civilization" within Brazil's early stages of development.

FIGURE 1 | Universidade de Brasília (Left) and Superblock (Right)
Graffiti on both "protected sites" show a social response to a rigid modernist urban environment. Lack of cultural meanings inherent in the built environment provokes appropriation, in this case through art. (Author, 2017)

Implications of decontextualized design of the built environment lead to disproportionate power given to few stakeholders where entire districts could be planned by a handful of people. Eisenman's doctoral dissertation –"The formal Basis of Mordern Architecture"- is a theoretical output of design and planning that became increasingly influential after WWII. In his dissertation, Eisenman analysed Le Corbusier's projections as pushing values of efficiency, functionalism and rational design. Corbusier's obsession for the industrial revolution led him to perceive people as "human types" making the users an annex to the built environment (i.e.: "living machines") and therefore an accessory to building design as opposed to a core value to its development.

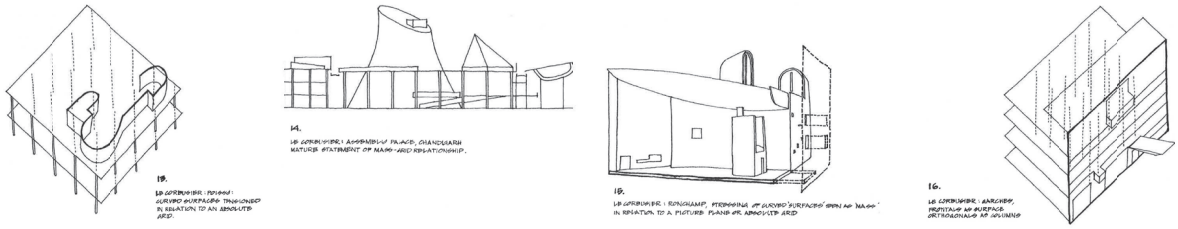

FIGURE 2 | Axonometric Drawings by Peter Eisenman
(Eisenman, 1963, p. 68)

Le Corbusier's theories for the construction of "the functional city" sought an immaculate –unnatural- order. Appreciation for social values of geographical and historical implications was missing from Corbusier's utopia which was popularized during his involvement with the CIAM (Congrès Internationaux d'Architecture Moderne) and later on via publication of his own "Charter of Athens"[2] manifesto (Corbusier, 1941).

Development of industrial proportions became a matter of progress and -just like many other developing countries- Brazil was eager to shift from an agrarian to industrial economy. With "progress" came the adoption of Modernism through which Juscelino Kubitschek –president of Brazil at that time- embraced a record breaking project starting in 1956 where he relocated the federal capital from Rio de Janeiro (Rio) to Brasilia in 5 years (Junker, 2015). After this project, Brazil gained international reputation and was placed in the spotlight for its examples of true Modernist architecture and planning. Brasilia was a materialized utopia of the functional city.

2 The CIAM was concerned with a unified representation of "the functional city" which was brought forward by Corbusier's "Charter of Athens" in 1941. The manifesto structuralizes zoning for cities based on four main functions: housing, work, recreation, and traffic (Conrads, 1970, pp. 137–145).


FIGURE 3 | Praça Dos Três Poderes (Left) & Exio Monumental (Right), Brasília (Author, 2017)

Global Visions, Urbanization and Space Appropriation

Industrial values encouraged efficiency via global systems that promoted decontextualization -or alienation- from the built environment and ultimately city development. The values I try to present in this introduction seek to illustrate the mass production of ideas that have decontextualized city building from the user experience by prioritizing urbanization and densification after WWII.

As presented by David Harvey, inequality has become proportional to city grow given the consequences global economic systems have had on globalization and space appropriation within cities. The following quote from Harvey clarifies this relation of globalization and urban development:

> *"Urbanization ratcheted up into hyper-urbanization, particularly after 1950 with the pace of urbanization accelerating to create a major ecological, political, economic, and social revolution in the spatial organization of the world's population. The proportion of an increasing global population living in cities has doubled in thirty years and we now observe massive spatial concentrations of population on a scale hitherto regarded as inconceivable. World cities and city systems have been forming with rapidly transforming effects on how the global political economy works. The city and the city-region have become far more important competitive entities in the world economy, with all sorts of economic and political consequences" (Harvey, 2000, p. 64)*

Harvey makes a point on acknowledging globalization and its social implications in terms of power dynamics and space appropriation making life quality a fundamental part of city development strategies. People have the potential to add value for cultural development, innovation and overall resilience of cities. By providing better living conditions through mobility, for instance, cities can contribute to the health and well-being of its populations and even attract future investments.

Acknowledging the user as a core design tool for urban development brings forth their importance as part of the solution and draws the focus away from some of the overwhelming forces affecting the urban space (ex.: global trends). City planning that is reflexive of human experience brings profound understanding for developing the micro-urban space (i.e.: experiential quality) as a step closer to *humanizing* and *localizing* global cities. Macro-quantitative research (i.e.: GIS and statistical analyses) can provide useful information on the overall performance of cities but do not address quality in terms of user experience. This type of research would further establish the importance of the experiential quality of the built environment where people are a key design tool for humanizing cities based on local values.

This study challenges the uncontested interdependence between urban, economic and political trajectories in global cities such as São Paulo (SP). These cities are exceptionally complex for addressing social sustainability given their political and economical dynamics. As explained by Sassen, global cities are urban materializations of globalization where financial clusters take place (Sassen, 2005) requiring massive amounts of resources for hosting suitable environments for its populations. To overcome what seems like a wicked problem (Rittel & Webber, 1973), it is useful to reframe the matter in question.

1.2 | ACKNOWLEDGING PEOPLE

Social conversation involves empowering and activating the users as part of the design solution as well as educating designers and planners on sustainable urban mobility. Understanding mobility through individual experiences becomes a step towards addressing people's well-being in developing the built environment. Mobility developed for adaptability, functionality and healthy travel gains resilience whereas development based on economic and technological constraints (i.e.: dominant systems) takes the power away from those personally affected by these systems. Resilience is not a synonym for sustainability but involves adding a cultural dimension to challenge technical preconditions in our societies (Manzini & M'Rithaa, 2016, p. 276).

Cosmopolitan Localization

Creating a sense of community in an urban context that is dehumanized by rapid development is an advantage for global cities (Sassen, 2005) that are constantly influenced by huge outer forces. The understanding of community as a way of creating meaningful social interactions between people is reminiscent of the idea of *play* – as presented by Beltzig- where experimentation and curiosity are key concepts to spatial engagement. Bünter Beltzig describes playgrounds as meeting places where children can embrace self-experimentation through new ways of exercising their intuition and feelings (Beltzig, 2015). In a similar way, people's interaction with public spaces has the potential to engage and provoke meaningful experiences.

Engaging urban spaces are a challenge to global cities (Sassen, 2005) given the overall understanding of prosperity –as presented by Harvey- is rooted in economic growth and power, not in health and well-being. Urban public spaces have the potential to foster experimentation, curiosity, coordination, social intelligence and intuition. Embracing the diversity of local values is something favoured by people as they are able to recognize their identity in local developments within cosmopolitan –often global- contexts. As an example, we can see the current success of local micro-breweries in cities (Manzini & M'Rithaa, 2016, p. 278).

The development of transit spaces (ex.: sidewalks, streets, roads) addressing individual experiences adds multidimensionality to the urban agenda by acknowledging local values. As much as well designed spaces could attract opportunities for community building and cultural development, poorly designed spaces could nest isolation and fragmentation in the community. In this perspective, development of a built environment sensible of local values is indispensable for strengthening the quality of public life with the potential to engage and provide pleasant experiences for people.

Awareness versus Blasé

Bridging from the idea of engaging urban spaces I wished to also understand the emotional disconnect of people in cities (i.e.: *blasé*) which seems to contradict instincts for emotional connectivity from a social point of view. Georg Simmel's text on cities and the spirit explains a blasé effect from the urban dweller as a layer that protects people from the non-stop chaos experienced within cities. Simmel notes the "intensification of the nervous life" (Simmel, 2005, p. 577) as something organic, or inherent, from the quick changes experienced

in a complex urban environment. People require changes to internalize the things around them. Nevertheless, according to Simmel, cities offer too much of this paradoxically making all changes perceivably the same and thus creating a *blasé* effect on people. Simmel argued this was a fundamental difference between the emotional development of life in a small town versus life in a big city.

Even more than 100 years later, we can appreciate some truths on Simmel's philosophy in the development of global cities today. Collective consciousness –further leading to emotional development and engagement- in global cities is in constant decay from an environment of systemic industrialization. The *modern spirit* became quantified where money was the common denominator (Simmel, 2005, p. 580). Economic growth thus superseded the development of societal values and local culture. Modern values were also linked to the high regard for mobility optimization in cities prioritizing the issue of faster time travel (ex.: private car) over better quality of transportation.

Acknowledging mobility as a citizen's primary interaction with the built environment is a crucial step for understanding its connection to lively streets. There are many examples of successful[3] transit spaces (i.e.: sidewalks, streets, roads) in global cities, such as New York's Highline and Times Square. Their success can easily be attributed to their acknowledgment local values and attempt to achieve an intimate urban space for users.

FIGURE 4 | New York's Highline & Times Square
Top (Author, 2013), Bottom (Peyman, 2010)

3 In this case by successful I intend to address the intensity of use and overall experience of the users. Experience involves joy, safety, protection from other elements and desire to return.

Planning and design of urban spaces can be difficult in terms of developing the right scale to accommodate for people and vehicle flow. Lack of an in-depth understanding of what is truly happening in the streets creates a necessity for research that explores the interaction of such elements. Jane Jacobs was one of the first post WWII thinkers to formally introduce and popularize the concept of humanizing the city by allocating "eyes on the street" (Jacobs, 1993). Jacobs' ideology for humanizing the city rested on improving people's sense of community, safety and relatability with their context -tied to the concept of *localism*- my attention to Jacobs is drawn in terms of which elements make the street more communal or "local".

Jacobs' approach to humanizing the streets in terms of community building is not far from the formerly explained idea of bringing people back from *alienation* (Simmel, 2005) via interaction with their urban environments. Both approaches rely on people being aware and responsive to their surroundings, an undeniable challenge for global cities such as SP.

1.3 | SOCIAL DISTRIBUTION IN THE CONTEXT OF SÃO PAULO

The city of SP, Brazil, was chosen as a case study as it clearly exemplifies on going global issues for rapid urbanization and changing demographics considered megatrends given their unstoppable course of action (Retief et al., 2016)[4]. According to a UN Habitat's report on world cities, the Human Development Index (HDI) for major cities in Brazil exceeds the country's national average. In the span of about 100 years, SP has evolved from a small town to a powerhouse of commerce representing 33.9% of Brazil's entire GDP (United Nations Human Settlements Programme (UN-HABITAT), 2010, p. 32). Today, São Paulo Metropolitan Region (SPMR) is home to 20.7M people (SEADE, 2017) making it the most populous metropolitan region in South America. Given SP's wealth and resources available people continue to migrate in their "quest for civilization" and a "better" life.

Considering the importance of global megatrends (i.e.: urbanization & globalization), it was relevant to work with a city that possessed those characteristics. In this case SP becomes my context of research where the experiential quality of the built environment is analysed as a result of global trends and regional processes. Furthermore, in order to remain unbiased I chose a context that was different from my personal background but not completely foreign. This rationale narrowed down my selection to a global city in Latin America. Research sought to bridge personal cultural boundaries and set an example for professional sensitivity when working on international projects.

As will be explained in chapters 4 & 5 (Context of Research & Results), international economic and political climate has had a direct impact on the morphology of the city as well as population distribution. Whenever a trend has taken place globally, SP has been influenced by it and such trends have provoked an effect on the development of the city. My aim was to highlight critical concerns in terms of sustainability and well-being in cities like SP. The six individual experiences -presented in chapter 5- are specific but not extraordinary to the experiences of other people also living in global cities. I do not attempt to resolve all problems analysed but discuss and reframe urban development issues by addressing the experiential quality of transit spaces (i.e.: sidewalks, streets, roads).

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4 As presented by Retief's article on global megatrends for the 21st century there have been identified 6 key trends: "i) rapidly changing demographics, ii) rapid urbanization, iii) accelerated technological innovation, iv) power shifts, v) resource scarcity and vi) climate change." (p.53)

Population Distribution Rings

At the beginning of the XXc., SP experienced intense interior population migration from rural settings due to the adoption of industrialization in 1950's as the city's main economy. This industrial bloom was abandoned by 1980's (i.e.: deindustrialization & decentralization), with 1990's really pushing toward a global economic strategy which propelled growth of the service industry region wide (Taschner & Bógus, 2001, p. 31). All these changes in economic strategies determined what jobs were available and where public funding was spent for services and infrastructure development. Most importantly, job availability and location had a direct impact on people's livelihoods.

Falling back on Bógus et.al research where they evaluate SP's population distribution along the past 50 years; it is shown the central population has actually decreased -5.4% whereas the peripheral population has increased +37% (Bógus et al., 2017, p. 311,312). The figure 5 below illustrates this phenomenon. Is important to acknowledge that the highest level of urbanization in SPMR does not reflect population density. On the contrary, more people have been moving out of the centre rather than inside it although verticalization has been happening primarily in SP's centre. Population density is also higher in the periphery were predominantly low income families reside.

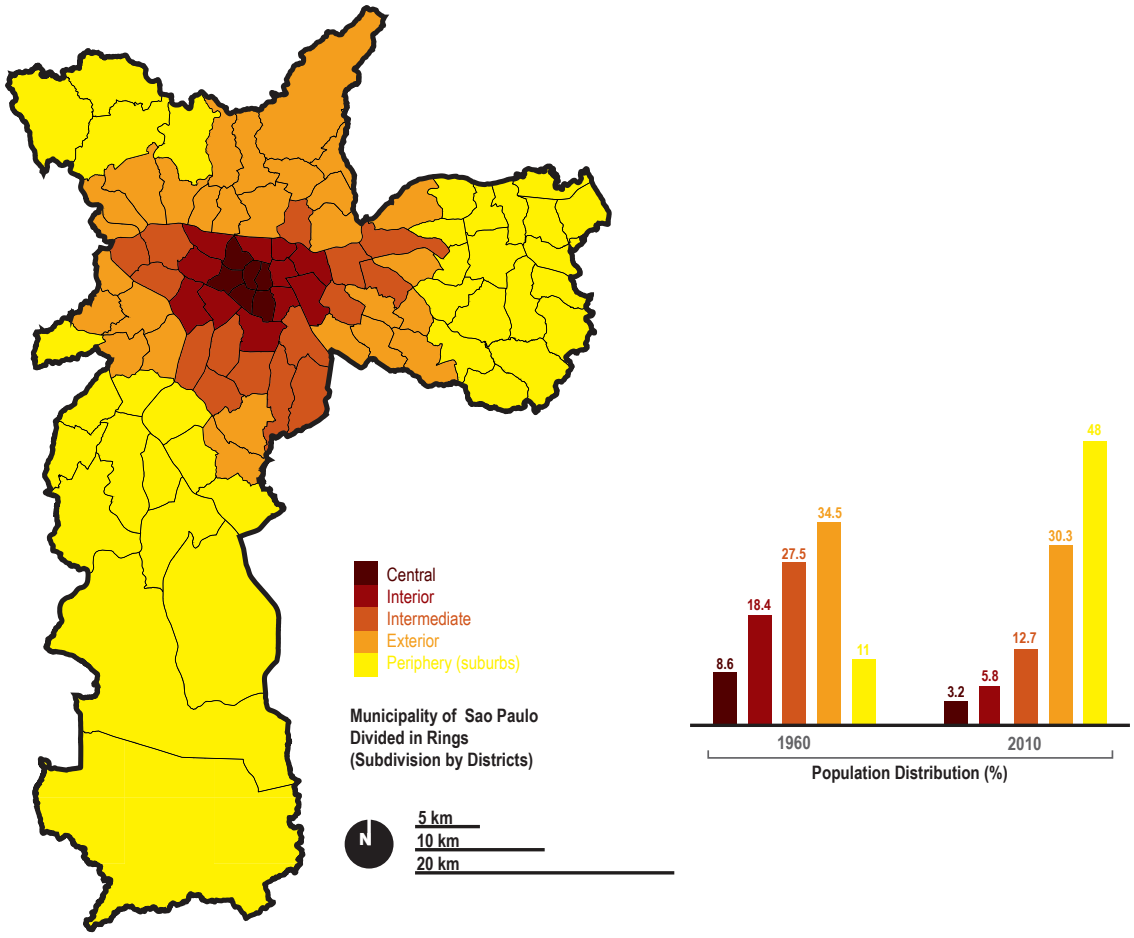

FIGURE 5 | Population Distribution Between 1960 & 2010 (Ring Division)
Illustration by Author (2018) based on IBGE, Censos Demográficos de 1960 a 2010. População por anéis do Município de São Paulo (Bógus et al., 2017, p. 312)

Job Distribution vs. Population Density

Concentration of jobs in SPMR is almost reciprocal to population density where the ratio of jobs to residents is 600:100 in República (centre) as opposed to 8:100 in Tiradentes (far East) (Bonduki, 2011, p. 25). Leaving aside the economic complexes of wages that aren't high enough for people to afford living close to the city, job scarcity in the periphery increases the need for inter-municipal (i.e.: pendular) mobility which is currently underserved. When there are not enough jobs or services within a municipality, the residents must move to other municipalities on a regular basis. The current conditions in SP's job market stress the need for transportation infrastructure development in the city.

FIGURE 6 | Street 25 De Março,
Centro Neighbourhood (SP) (Author, 2017)

1.4 | THESIS STRUCTURE

Chapter 1 introduces the background problem and offers a perspective on outer forces affecting the urban space alongside acknowledging individual people's experiences as important for city development. Research question and purpose of the study are mentioned here. Finally, the case of SP is introduced through the issues of urbanization and mobility.

Chapter 2 oversees the theoretical backbone for the proposed methodology as a combined methods approach while Chapter 3 presents a literature review of the different topics covered in the thesis. It starts with the experiential quality of the journey itself; the significance of public space; implications of infrastructure and transportation in mobility; social justice in terms of space appropriation and segregation in the city.

Chapters 4, 5 and 6 focus on the context of research (i.e.: SP & SPMR). First, a brief text and figures illustrate the structure for presentation of data. Second, an overview of SPMR's in combination with 3 historical timelines is shown: socio-political, land use, transportation. These provide necessary background information to understand key issues in terms of the development of the city alongside societal dimensions. Third, regional analyses of SPMR are presented much like a conventional urban planning research strategy. These macro-analyses demonstrate number of trips per day, mobility tendencies, pendular mobility and trip duration.

Data was useful prior to starting the qualitative analyses based on 6 interviews from residents in SPMR. Their basic information, actual journeys during the week and description of their particular experiences is explained for each of them. Subsequently, critical points are identified from journey and photo log analysis. The entire process meant to highlight issues in the urban context that were particular to them and linked to wider contextual issues.

Chapter 6 opens up a discussion based on the research and results gathered. This is followed by conclusions -Chapter 7- where lessons learned from the interviews and data analysis process is explained. References can be found in Chapter 8 and appendixes in Chapter 9 (i.e.: collaboration letter, interview guiding questions and complete photo logs). The timeline in figure 7 illustrates the process for the 18 months utilized for the development of this thesis:

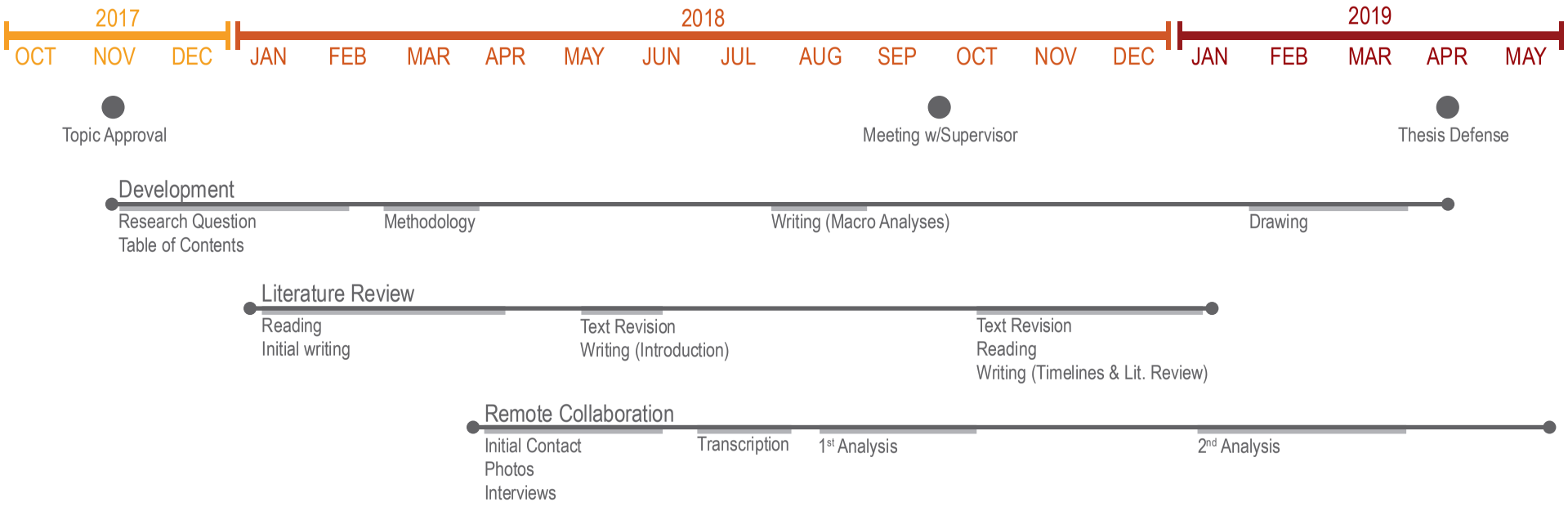

FIGURE 7 | Thesis Timeline
(Author, 2019)

2 | METHODOLOGY

2 | METHODOLOGY

2.1 | COMBINED METHODS APPROACH

As presented by Rebernik et.al governments are facing challenges in addressing the complexity of city growth in conjunction with the citizens' quality of life (Rebernik et al., 2018, p. 195). One of the main motives for analysing the city from an experiential perspective comes from the lack of transparency, segregation and oppression already exercised by political and economic forces –especially in developing countries-. These non-inclusive urban planning methods are strengthened by participation that relies on conventional democratic –highly bureaucratic- systems (i.e.: voting). Is worth noting, democracy is positive only when it is inclusive of all parties in society –not just the wealthy- and is transparent (i.e.: open access).

Seven months of ethnography-type research done during my exchange term in SP was combined with one month of remote qualitative data gathering. The in-situ research provided firsthand experience for many socio political issues in SP and how they translated into daily travel experiences. To facilitate the remote data collection, each interviewee's journey and photo documentation was analysed after a semi-structured interview.

A combined methods approach can offer understanding of the users and their needs, similar to a "bottom-up" planning strategy (Rebernik et al., 2018, p. 196). Adopting a combined methods approach implies acknowledging different stakeholders for city planning which can open the possibility of addressing real time life quality issues with more inclusive spaces reflexive of people's culture and community. Ultimately, the aim is to gain knowledge about the quality of the built environment via particular experiences and use this knowledge to complement macro-data (i.e.: GIS and statistical data) analysis in urban planning.

Addressing complex systems in a city requires an understanding of the interdependence between rapid societal, urban and demographic transformations. While reviewing existing literature I discovered many studies argued for a combined methodological approach to urban planning for the purpose of addressing sustainability components (i.e.: social, economical, ecological). Furthermore, as mentioned previously, adding a cultural dimension can address issues of cosmopolitan localism for developing more resilient societies where cities can embrace a new idea of well-being (Manzini & M'Rithaa, 2016). This cultural component is addressed by understanding individual experience and its relation to the wider urban context.

3 | LITERATURE REVIEW

3 | LITERATURE REVIEW

3.1 | EXPERIENTIAL QUALITY OF THE JOURNEY

Over the past decade there has been an increasing interest in the link between travel and well-being (De Vos, 2018, p. 263) derived from research on the importance of travel experience. Today we are grasping the connection between emotional well-being, behaviour and attitudes towards urban mobility which has been a subject of scientific studies (for example; Friman, Olsson, Ståhl, Ettema, & Gärling, 2017). Daily work commutes are explored in Friman et. al's article due to the journeys being continuous and thus constantly affecting people's lives (Friman et al., 2017, p. 173). Elaborating on the mode, as presented by De Vos, *"…it is not the chosen travel mode itself that affects travel satisfaction, but whether the chosen mode is the preferred mode."* (De Vos, 2018, p. 271). His results showed cycling -despite being a favoured mode of mobility in his study- when forced upon users is highly disliked.

Urban mobility is not merely about function but also involves dealing with logistics of the mundane elements of travel experience (Cochoy, Hagberg, & Canu, 2015, p. 2268). Cochoy et al. research on the loads people carry when travelling as part of the mundane. In my research, I interpret these elements as underlying motives for choosing one travel mode over another or establishing route variations. This notion of the *mundane* could help planners identify -and possibly relate- motives and experiences of people's commute. Mundane journeys (i.e.: commuting) make up an important part of people's sense of the city and can shape certain attitudes and behaviour patterns depending on the quality of the journey.

Experience (i.e.: human senses) plays a crucial role in people's life quality which is one of the key aspects linked to the notion of "humanizing the streets". This concept has been previously explored and presented by Jane Jacobs through community building attempts by suggesting people themselves be the "eyes on the streets" of New York (Jacobs, 1993). Jan Gehl built upon Jacobs' ideology by presenting a case for designing "cities for people" (Gehl, 2010) via sensible urban scale and development of the public square for community building and citizenship.

Jacobs' and Gehl's presentation of the street as an urban space capable of adding value to city living plays a key role in the development of this thesis. According to Gehl, urban design should be shaped through human senses and can either add or subtract value to the streets. The concept of *value* is presented by both authors as multidimensional, aimed to improve various aspects such as well-being, health, community and citizenship. Both authors argue value based on city living has positive economic ramifications because when people develop a sense of belonging (i.e.: local culture) they stay and invest. As an example, Gehl presents "staying activities" as an opportunity for the street to invite people to linger (Gehl, 2010). This can be achieved by designing few but important spaces, which together co-create a network of mini-clusters for recreational areas in the city. Both Jacobs and Gehl argue against urban design that sees value through industrialization, densification or profit where economic incentives tend to deter away from professional "good sense".

The notion of *public* as a resource available for everyone should not be limited to recreational or commercial spaces in the city. Building on this concept, I argue for transit spaces as forming part of the public sphere through which mobility itself becomes a right. The mobility experience directly relates to people's engagement with the streets in terms of accessibility. Due to their functionality, the streets could be the most unintentionally visited public space in the city. From this perspective transit spaces (ex.: sidewalks, streets, roads) are a priority for high quality spaces. SP's innate diversity provides the opportunity for analysing numerous complex systems working together (ex.: mobility and human development). As presented by David Harvey, urban evolution is

an interdependent process where the population changes the city and vice versa (Harvey, 2000, p. 9,10). To embrace existing societal values through urban design is to acknowledge the development of culture with the same importance as the development of the built environment.

SP is often referred to as a global city (Sassen, 2005) given its connectivity to the global market. The cultural dimension of such a place is incredibly interesting given its complexity in terms of economic and socio-political interdependence with globalization. As presented in José Magnani's ethnographic study on SP it is important to acknowledge the "disaggregating aspects" of the city as manifestations of social, economic and demographical discrepancies (Magnani, 2002, p. 12). Ultimately, better understanding of the cultural build up (i.e.: societal values) of the city can contribute to decisions on development that aim for a prosperous city as much as a prosperous society (i.e.: people, local culture).

3.2 | COMMUNITY & NETWORKS

As presented by Francis et al. in their article about the role of public space they introduce *sense of place* and *sense of community* as crucial to the success of these types of spaces. Community refers to belonging, commitment and shared faith whereas place is related to attachment and identity (Francis, Giles-Corti, Wood, & Knuiman, 2012, p. 401). Embracing the notion of community and sense of place can be a challenge for megacities like SP where urban blasé deters people's engagement.

Megacities usually possess an unconventional distribution of spaces shaped by internal and external forces where space appropriation is based on spatial relations (Magnani, 2002, p. 15). Under this understanding central is not a matter of location but a matter of relation. In Moreira's doctorate thesis she argues roads provide a good hint for network connectivity because their morphology has evolved alongside the city (Moreira, 2016, p. 167). The roads ("vias públicas" in Portuguese meaning "public paths") echo the city's geography before transportation became predominantly motorized. The argument presented by Moreira further shines a light on the importance of "public paths" to network people in the city.

Implementing networks instead of standalone public spaces acknowledges the mobility dimension of their functionality. Networking goes in line with Rolnik's argument for mobility as an in-between right to access other fundamental rights and services in the city where open public space is accessible and temporarily owned by those who occupy it (Francis et al., 2012, p. 402). The importance of visual continuity in open spaces together with physical permeability allow for people to move through the environment and see available routes at the same time (Francis et al., 2012, p. 407). In this sense, an open public space has the potential to act as a gluing agent for businesses, communities and institutions.

As mentioned by Jacobs, parks are an extension of the existing infrastructure in neighbourhoods (Jacobs, 1993) where is not enough to think of them as additional spatial features but as connecting spaces (ex.: sidewalks, streets, roads). A boring neighbourhood with empty streets will have boring parks, plazas and squares. Unfortunately in SP –as expressed by one of the interviewees as well as in Moreira's doctoral thesis- plenty of sidewalks fall under the cracks of "ghost management" where lack of agency results in poor quality for these spaces. Sidewalks are forgotten by planners and governmental institutions (Moreira, 2016, p. 190) despite their importance for public space development. Addressing issues of ownership and management are crucial for planning, maintenance and civic agenda.

Some theorists argue that focusing on the sidewalk as an open public space can help with issues of social justice (Moreira, 2016, p. 173). At first it seemed naïve for me to assume that putting people in the same space would get rid of social stigmas, however by providing an open arena (ex.: sidewalk) chances of claiming the

space become relatively equal. On the other hand, an enclosed space or vehicle limits the ability of people to relate bringing forth the importance of healthy public spaces and social justice development in the city.

3.3 | INFRASTRUCTURE AND TRANSPORTATION

The average commuting time in SP is close to 3hrs per day (Rolnik & Klintowitz, 2011, p. 89) due to highly congested roads failing to meet the demand for daily trips -now counting 43.7M- according to the most recent mobility survey (Metrô/SP, 2012)[5]. Rolnik has authored many publications that look at public policies for transportation, distribution of resources and mobility in SP. Rolnik argues for transportation as an "in-between right" to other fundamental rights (i.e.: education, food and shelter) since without the right to mobility people cannot access services provided by the city.

The prioritization of the physical expansion of the road system in SP in 1949 was fuelled by Robert Moses' "urban highways" concept formerly proposed in New York City (Rolnik & Klintowitz, 2011, p. 92). Almost exclusive development for the automobile from 1940 to 1990 (Avella Netto & Ramos, 2017, p. 65) has led to tremendous issues in the city in terms of traffic congestion in relation to urban expansion. Congestion was further aggravated in the 1990's with Brazil's intent to make the middle class (Vasconcellos, 2017, p. 5) which used public money to provide infrastructure primarily for automobiles (ex.: expanding roads & parking areas). In addition to this, reforms and available credit made it easier for families to acquire their own vehicles. Between 2002-2012 daily trips in SPMR increased by 13.1% (Metrô/SP, 2002, 2012), with only 8.1% population increase (SEADE, 2017). It is worth questioning the increasing demand for mobility and whether or not the city is providing the correct infrastructure for the needs of the population.

A series of factors -primarily in the last 100 years- has shaped the morphology of cities across the world. This change can be seen most predominantly in global cities that have had a direct impact from the outer forces of globalization (i.e.: global market economies and technologies). Brazil experienced intense urban growth after WWII such that between 1950 and 2010 the urban population increased by 80% (Vasconcellos, 2017, p. 1). The change of economic offer and low compensation among workers, led to significant amount of SP's population to find cheaper land in the outskirts of the city. Plenty of this land was unregularized (i.e.: informal or illegal) and was of little importance to the collective interest making the periphery low priority areas for implementing accessibility and connectivity. Some analysts refer to the periphery as an area of *"uncontrolled and unorganized growth"* (Avella Netto & Ramos, 2017, p. 61) where due to their illegality and informality little public money is invested. Naturally resulting in *"alternative informal social organization and social order… where the state appears to have abandoned its citizens"* (United Nations Human Settlements Programme (UN-HABITAT), 2010, p. 73).

In terms of policy development Eduardo Vasconcellos –author of multiple publications on urban transport development in Brazil-, explains generally people will search for improvements that are relevant to them alone instead of the public. Since most pedestrians[6] represent low income populations they lack the political leverage to pressure the authorities whereas high income populations can afford to lobby their own interests (Vasconcellos, 2017, p. 3). Further supporting Vasconcellos' argument, Carmona's writings about the developing process and stakeholders acting as lens for power relations (Carmona, 2014, p. 11) supports his theory for infrastructure prioritization towards motorized –private- mobility in SP.

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5 Number of daily trips include collective, individual, motorized and non-motorized modes.

6 In this case, the word "pedestrian" is referring to those populations that mobilize primarily by foot, not people who may occasionally make use of the street as a complementary form of micro mobility.

Activist groups that pursue other modes of transportation focus on mobility as a form of recreation and leisure in the hopes to divert political attention from a "right to mobility" issue to a strategy for providing recreational services for the general population. This type of social reform is not as controversial for the powerful high-income groups since low-income populations cannot easily access the new proposed services anyway. There have been successful reforms for implementing weekend-only bike lanes such as the Minhocão Expressway and Paulista Avenue, both in central SP. These reforms framed cycling as leisure instead of a main mode of transportation.

Rolnik's outlook on mobility as a right antagonizes Moses' concept for "urban highways" almost exclusive to vehicle owners. Exercising mobility as a "right for all" in transportation development brings forward a human dimension able to harvest social values within higher levels of city planning. Emphasizing societal values for infrastructure development can drastically change the prioritization of public projects and how planners assess mobility and accessibility as means to improve the urban experience.

3.4 | SOCIAL JUSTICE

Pertaining to the discourse of social justice Henri Lefebvre's writings on "Right to the City" (1968) and "The Production of Space" (1974) can be referenced alongside David Harvey's argumentations on modern human geography and injustice in capitalism as a system (1982, 2000). In their respective times, both authors' have widened Marxist theory by embracing daily life, spread of industry and its relation to the city. Their exploration of the *mundane* brought relevance to the effects of social injustice within the urban context. Being a global city in a developing country SP faces complex issues in relation to urban development and injustice. In order to advocate for public streets as a democratic right first it is necessary to argue who has rights over that space and why. Furthermore, whether the concept of *public* involves open access to everybody or just those populations considered valuable for city development.

Raquel Rolnik's article provides an overview of SP's issues on policy and infrastructure development from early 1900's to 2010 and points out on selective municipal economic investment on road infrastructure with *"…almost 50 percent of the investments were directed to regions where the population has the highest purchasing power in the city"* (Rolnik & Klintowitz, 2011, p. 102). There are huge contrasts of infrastructure between neighbourhoods in relation to their nobility and economic advantage. The expenditure of municipal budget exemplifies some of the underlying societal values in the city, which can be hurdle for fair infrastructure development and policy-making. Irrespective of economic growth Brazil continues to be one of the world's top places for segregation and inequality ranking 10th worldwide according to Gini ratings (United Nations Human Settlements Programme (UN-HABITAT), 2010, p. 7).

Some scholars defend public policy reform in favour of increasing the local value of the city through three agents: multilateral organisms working with international consultants, transnational corporate interest, local elites (Magnani, 2002, p. 14). This sort of thinking can be seen as a manifestation of capitalist values making their way into academia. In fact, Brazil deals with very strong and distinct values from different social groups constantly. Eventually is not so much a matter of righteousness but a matter of power and execution where the latter are mostly exercised by agents with the highest economic advantage.

Politicians and real estate developers embrace urban growth through constant "creative destruction" of the city (Bógus et al., 2017, p. 260) as a way to fuel economic growth. Best case scenario, if a Master Plan is put in place, strong political-economic interdependence can cause planners to promote selective interests and ideas for city growth (Uitermark & Nicholls, 2017, p. 33) that have been sponsored by those agents with the most

power. Reflecting upon Gramsci's ideas, the problem would not be the "lack of knowledge" of the working class but the negation of this knowledge as valid according to bourgeois' (i.e.: elite) "common sense" (Uitermark & Nicholls, 2017, p. 35).

Purposively diverting the interests of planners towards elements that are less politically controversial (ex.: individual experiences), shifts the attention to develop cities based on user's well-being. This is a different outlook from spaces projected through conventional "democratic justice" which is a term often used to disguise multiple layers of bureaucracy. A clear example of polluted "democratic justice" is the location and design of Ibirapuera Park in SP which is surrounded by wealthy neighbourhoods (Ex.: Paraíso, Vila Mariana, Itaim Bibi, Jardins) and considerably difficult to access via public transportation in comparison to driving.

4| CONTEXT OF RESEARCH

4 | CONTEXT OF RESEARCH

4.1 | PRESENTATION OF DATA

As previously explained, there has been little development for urban planning that is mindful of user experience. Exists research that observes and concludes issues such as: privatization of public spaces (Magnani, 2002, p. 12), gentrification linked to globalization (Taschner & Bógus, 2001, p. 32), relevance of the place in the everydayness (Kočková, 2016, p. 423) and the significance of the urban context in key anthropological concepts (i.e.: people, networks, relational perspective, diversity) (ZRNIĆ, 2017, p. 205) but without a clear link to public engagement, community building or citizenship. Analyses in the context of SP were addressed by first covering important macro-data (i.e.: GIS & statistics at a regional scale). Later on, six interviewees provided useful qualitative micro-data pertaining to their journeys and perceptions of the urban environment.

The history of SP is presented via three different timelines informing of the contextual narrative from the moment SP officially became a city until today. The timelines made it easier to overlay complex socio-political issues and their implications in the distribution of wealth, policy-making and land use in the city. Since qualitative data focused on mobility, it was also important to highlight pivotal moments for transportation development as part of the quantitative data gathering.

Later on, conventional macro-analyses typically done by urban planners was covered for awareness of current macro-dynamics in the city. Information gathered from SP's Metropolitan Region (SPMR) includes number of trips per day, mobility tendencies, pendular mobility (i.e.: movement across municipalities), population density and commuting times. Statistical data contributes to the planning of transportation routes but provides little return in terms of the quality of the network itself. To address the quality of the urban space, data collected from individuals living in SP was presented and analysed. Below is a graph synthesising this macro- to micro-assessment of information:

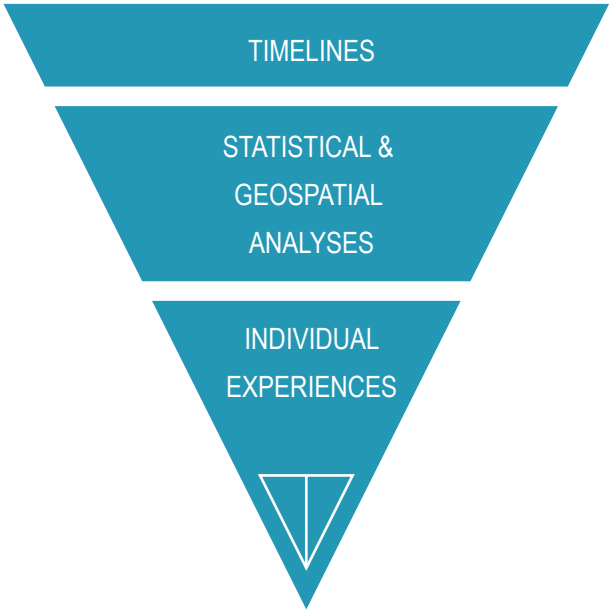


FIGURE 8 | Quantitative Data Analysis Process (Author, 2019)

Interview Process

For a critical assessment of the built environment and quality of trips overall, a sample of people from various socio-demographic and socio-economic backgrounds were chosen. To recruit the interviewees I contacted people I had previously met during my exchange term in Universidade de São Paulo (USP) during spring 2017. They were informed of the methodology in advance, some volunteered to participate and some referred me to other people. Interviewees were aware their involvement in this project meant to grasp a personal understanding of how they experienced the city in their daily travels.

Six individuals agreed to be interviewed for the study[7]. In this sense, the number of interviewees was dictated by the amount of people that freely chose to be involved as no compensation was given to them for their participation. A diverse sample –or as diverse as it could possibly be- was key to expand on the qualitative data gathering. Interviewees were not meant to represent their entire social groups but to provide meaningful insights in regards to the quality of the urban space, mobility and accessibility.

Since I was working from Helsinki, I thought of a process for remote data gathering while still developing a sensible understanding of the problem. This process sought to reconcile the in-situ research done prior during spring 2017. My aim was to gather qualitative data via journey mapping, photos and interviews. Eventually the interviewees' experiences were analysed and used to complement the macro-analyses (i.e.: regional maps). It was my goal to evaluate a possible link between the built environment and emotional engagement when using transit spaces in the city. The graph below synthesizes the entire process for the remote participation component of the study:

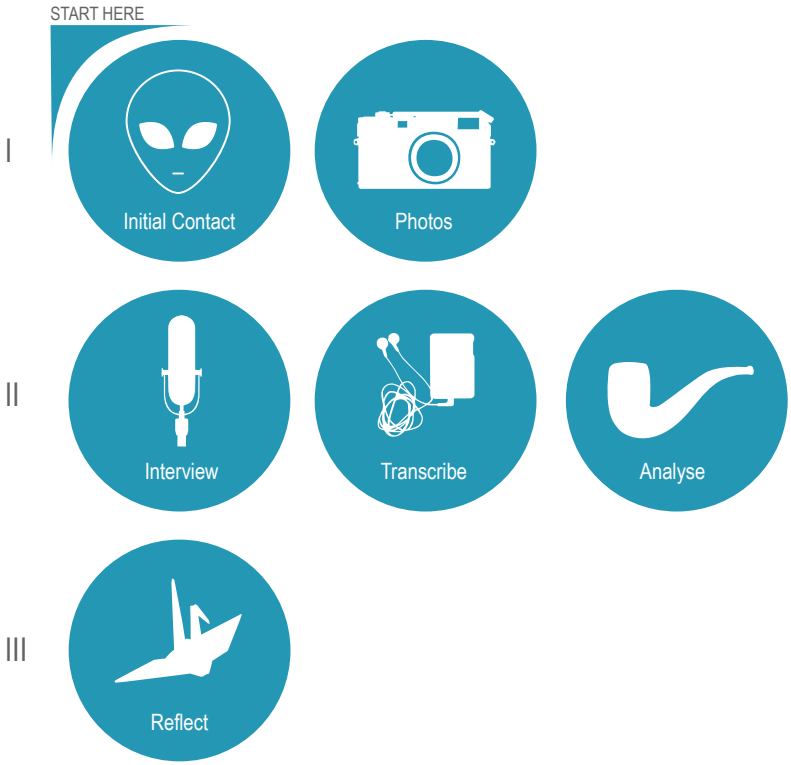


FIGURE 9 | Interview Process
(Author, 2019)

7 Initial "Collaboration Letter" was sent in April 2018. The letter was drafted in English & Portuguese and is enclosed in Chapter 9 (Appendixes).

Although interviewees were chosen, the group was made as diverse as it could possibly be. Reflecting back on the diversity of interviewees, it would have been optimal to have a sample from an elderly person (0/6) and someone else with basic education (2/6) to counter balance the sample of people with higher education (4/6). The six interviewees are listed below:

Leonardo	45	Professor	Mooca (São Paulo)
Antônio	24	Student	Chácara Inglesa (São Paulo)
Ana	15	Student	Vila Independencia (São Paulo)
Bruna	24	Architect and Urban Planner	Jardim São Francisco (Caieiras)
Thiago	45	Writer and Public Servant	Jardim Paulista (São Paulo)
Marcos	27	Bartender	Vila Siqueira, Zona Norte (Brasilândia)

Steps were carried through the following way:

(1) A letter involving the process written in English and portuguese was sent to the interviewees.

(2) Study participants were to take 5 pictures of their daily commutes in the city during one week.

(3) The week after returning the pictures we would have a 30 minute unstructured interview to go over their journeys.

(4) Interviews were recorded and transcribed.

(5) Accurate mapping of journeys and photo logs was executed.

Focusing on the experience of transit spaces directs the planner's focus towards the quality of these spaces. At the very heart of this process is the opportunity for new conversations and understandings after reframing the problem. This approach can help urban planners break down complex issues for the development of transit spaces (i.e.: sidewalks, streets, roads) via paired analyses of quantitative and qualitative data samples.

4.2 | SÃO PAULO: A HISTORY

In this section I will introduce general knowledge in terms of the evolution of SP and SPMR through socio-political events, the built environment (i.e.: land use) and infrastructure (i.e.: transportation). Research showed interdependency between the studied areas. It was not possible to understand the way people perceived the built environment without prior understanding outer forces influencing this. Mobility has been shaped drastically by matters of segregation, gentrification and cultural built up over the last century and the following 3 timelines attempt to illustrate how SP and SPMR arrived to its current state. Further and more importantly, how transit spaces have fallen into the cracks of city jurisdiction hindering their potential for adding value to the city by addressing well-being in terms of their experiential quality.

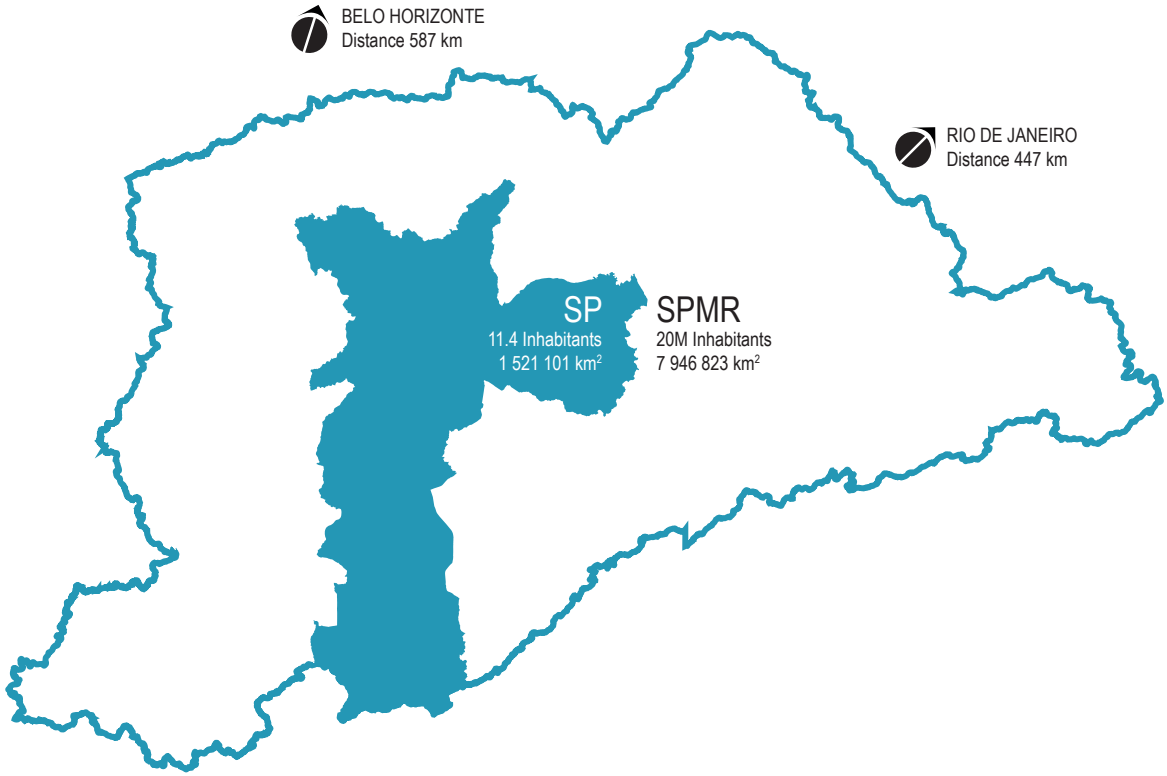


FIGURE 10 | São Paulo city (SP) and São Paulo Metropolitan Region (SPMR)
SPMR Population 21.6M | Area 7 946 960km2 (Emplasa/IBGE, 2018)
SP Population 11.3M | Area 1 521 110km2 (IBGE, 2010)
Illustration by Author (2019)

Porto Seco: The Dry Port

Brazilians' first encounter with a complex sedentary society –as presented by European values- was with the arrival of the Portuguese at the beginning of the XVIc. (Meyer, 2010). From this moment, Brazil gradually became colonized and evangelized. SP was founded by Jesuits in 1554 (Moura, Oliveira, & Figueiredo, 2014, p. 137), it was selected due to its regional connectivity and elevated topography which allowed for panoramic views through the rainforest. Moreover, SP was connected to other important cities (ex.: Rio) by rivers which made it relatively fast and easy to access. Until 1860's rivers were the main channel of circulation between cities shaping SP into a radial design.

Briefly after SP was founded crusades searched for indigenous populations to sell as slaves for plantation work (Barbosa, 2001, p. 35). Eventually natives were considered "too weak" for labour which engaged Brazil in an Atlantic triangular trade -slaves were brought from Africa to cultivate coffee and sugar; these goods were then exported to Europe through Rio-. It was not until 1822 that Brazil went through a non-violent independence from Portugal (Meyer, 2010) and 1888 till the abolition of slavery (Barbosa, 2001, p. 45).

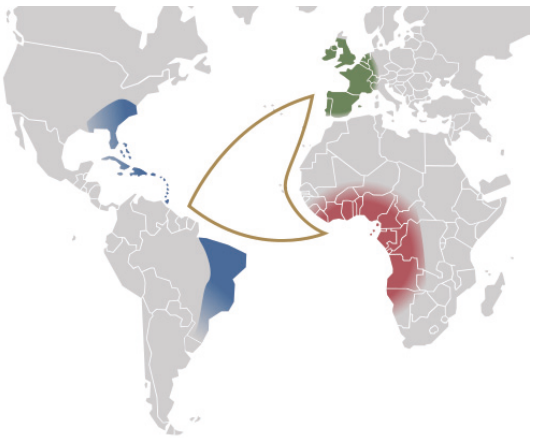


FIGURE 11 | Atlantic Triangular Trade
(MacDonald, 2011)

Coffee was planted for the first time in Brazil in 1727 (Barbosa, 2001, p. 44) with its first plantations located in Rio –former capital of Brazil -. As the international demand for coffee increased, Rio became saturated and plantations began to emerge in SP in 1860 which brought more wealth to the city (Barbosa, 2001, p. 44). Many plantations were naturally close to what today is considered the historic centre of SP. The centre became a place for wealthy elite families who owned land or factories. By 1900's the worldwide demand for coffee was met which implied a change in commerce and land use in the city (Barbosa, 2001, p. 52). Many plantations by SP's centre were allotted and developed into high-end residences, Campos Eliseos being one of the first ones from 1882 to 1890. The new allotted land was kept within the elite families.

Socio-Political

After independence from Portugal in 1822 (Meyer, 2010), development was embraced through commercial economic progress. With the royal family eliminated from Brazilian society, few elite families gained unprecedented political and economic power. As such, the few powerful continued to harvest and keep their wealth. From 1940 to 1960 capitalism was embraced as a model for national development resulting in rapid economic growth and regional migration from rural to urban societies. One major issue with this model was that urbanism in service of the market did not respond to societal and environmental needs (Bonduki, 2011, p. 23). The results of this capitalist model could be seen through uncontrolled real estate development that led to rapid economic growth, vast amounts of segregation and urban divide. In 1940, 85% of the population in SPMR was living in SP. As the land became less accessible and the wages remained low most of the population was pushed to the periphery. In 2014, 40% of the population in SPMR lived in SP.

By 1930 there were some collective concerns from various social groups with respect to societal issues in SP. With the emergence of important educational institutions –including USP in 1934 (Jornal da USP, 2019)- strong divergent views on how society should be run began to take shape. Some views for progress differed greatly with modern capitalist development. It was when socialist and communist values began to take action that a military coup apprehended the government and ruled for economic progress and order from 1964 until 1985. Primary focus on capital growth and global trade combined with lack of freedom made Brazil more susceptible to what is now known as the "dependency theory" (Schmidt, 2018).

FIGURE 12 | Policemen Repress a Student Protest against the Military Dictatorship (SP) (Nery, 1977)

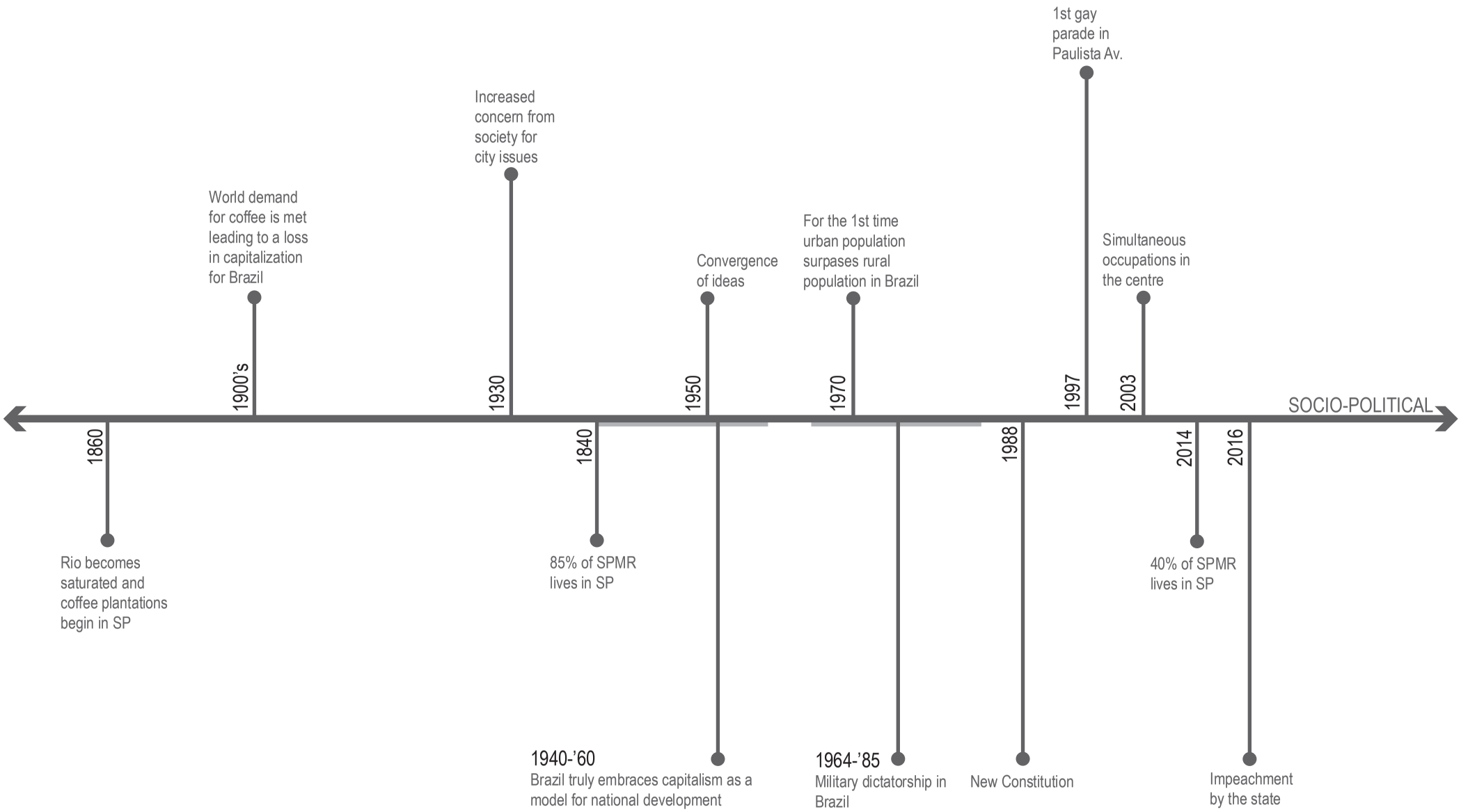


FIGURE 13 | Socio-Political Timeline (Author, 2018)

(*Dependency Theory*)

Studied by many social scientists, the dependency theory breaks down the phenomenon of the perpetuation of developing nations as always being "dependent" due to global trade dynamics and limited access to technologies that are available to developed nations. Bresser offers 3 perspectives in the dependency theory: super-exploitation, associated dependency and national contradiction (Bresser-Pereira, 2010, p. 21). In terms of social dynamics, the dependency theory offers many relevant insights for the bifurcation of classes in São Paulo as a result from contradicting capitalist versus nationalist values. The following quote reflecting on the socio-political climate in Brazil during the 1950's helps to illustrate this point:

"São Paulo's school of thought [ISEB] adopted a point of view that was cosmopolitan and antidistress, emphasizing the fight between classes, rejecting the possibility of national agreements and was not interested in criticizing the imperial relationship between developed and underdeveloped countries"
(Bresser-Pereira, 2010, p. 24)

This deliberate blindfolded attitude from the intellectual groups towards economic, technological and social development was not far from the attitude projected by other social groups. The suppression of alternative political and economic orientations (i.e.: socialist or "left-wing" orientations) led to the creation of policies that facilitated capitalist and individualistic values. Toward the end of 1980's these values became "popularized" (a.k.a. populismo economico) and appropriated as redemocratization and social justice contributing to the loss of national identity through the growth of neoliberal hegemony (Bresser-Pereira, 2010, p. 41).

Beginning in the early 1960's leftist political tendencies set off the previously mentioned military coup. From 1964 to 1985 Brazil was subject to a ruthless dictatorship that pushed the country's economy for international trade and economic growth –during this time human rights were second to national development-. A new constitution was put in place in 1988 (Bonduki, 2011, p. 27), human rights were restored and minorities began to gradually reclaim the city. Materializations of this can be appreciated in various events that have taken place in the past decades. For example, SP's first gay parade by Avenida Paulista in 1997 and the simultaneous occupations of abandoned buildings (i.e.: cortiços) in the historic centre in 2003. Both events show the reclamation of urban spaces by minorities in the city as an open resource.

Land Use

As SP's commercial importance in the region grew, it also became more populated. New laws began to accommodate for the demand, for example in 1836 a law facilitated the disappropiation of real estate for public interest (Barbosa, 2001, p. 41). With the reduced demand for coffee, the plantations that existed in SP began an allotment process, which subdivided large portions of land for further development. One of the first pieces of land allotted was Campos Eliseos from 1882 to 1890. Followed by the allotment of Higienópolis plantation in 1893, there was a clear commencement for a pseudo real estate monopoly where elite families had significant accessibility to acquire land over other social groups.

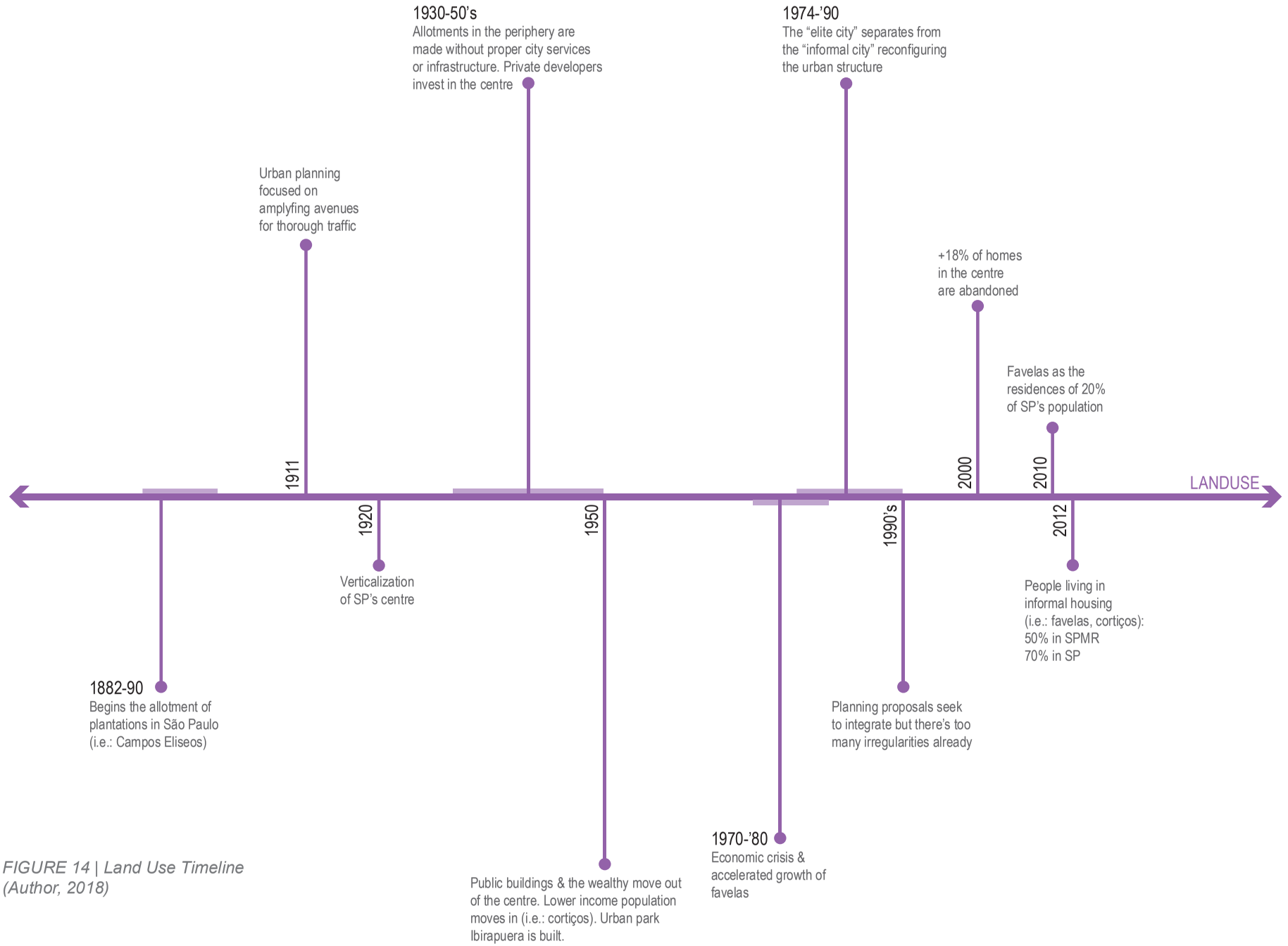


FIGURE 14 | Land Use Timeline (Author, 2018)

In 1911, an urban planning competition opened the way for a new vision for SP and its zoning. Proposals focused on amplifying existing avenues for thorough traffic in the centre and intensifying land use. (Barbosa, 2001, p. 54) Laws were put in place to try to control the real estate market however most of the development was done by private investments (Lajut, 2016, p. 30). Eventually, the verticalization of a predominantly commercial centre with high-end buildings pushed the lower income populations out to the periphery (United Nations Human Settlements Programme (UN-HABITAT), 2010, p. 88). New non-regularized allotments were subserviced and lacked property records. SP's first urban planning department was created to implement official zoning in 1947 (Barbosa, 2001, p. 62), however the segregation and verticalization process for the city had already began in the 1920's.

By 1950, governmental buildings and wealthy populations began to move out of the historic centre. With the transfer of the governmental buildings to a new place also began the development of SP's biggest urban park: Ibirapuera. Two avenues ("avenidas" in Portuguese) and one freeway ("corridor" in Portuguese) hug this park. Vulnerable and homeless populations took vacant buildings in the centre. The economic crisis from 1970 to 1980's elevated the land prices and lowered wages which accelerated the growth of informal settlements –commonly known as favelas[8] or cortiços[9] (United Nations Human Settlements Programme (UN-HABITAT), 2010, p. 74) -. As insecurity raised, the centre became a place of danger after working hours (Barbosa, 2001, p. 67). By 2000, over 18% of homes in the historic centre were abandoned (Bonduki, 2011, p. 26). Today its land use is 70% service-commercial and 30% residential with about half of the population in the area being homeless.

Roughly between 1974 and 1990 occurs a strong separation between the elite and informal city due primarily to social exclusion. This separation further reconfigured the urban structure of the city where *"…new urban duality as both cause and consequence of exclusion, insecurity and violence […] led to social and spatial fragmentation, creating an alternative informal social organization and social order in places where the state appears to have abandoned its citizens."* (United Nations Human Settlements Programme (UN-HABITAT), 2010, p. 73). Parallel power structures and alternative order fostered criminal activity and illegality. The two demographic extremes became the elite (i.e.: privileged and legal) versus the poor (i.e.: unprivileged and illegal). The remainder of the legal -non-elite- population (i.e.: middle class) was adopted by the system.

(*Social Exclusion*)

"[In Europe] ...exclusion is associated with social disqualification and relative deprivation in a context in which most citizens have relatively high living standards. By contrast, in developing countries, people may never have had acceptable living conditions, so social exclusion must be based on an understanding of what a basic standard of living would be in that context. Social exclusion/inclusion… [measures] …the gap that separates the wealthiest section of a society from the less privileged in any given location." (United Nations Human Settlements Programme (UN-HABITAT), 2010, p. 24)

8 Favelas are known as the Brazilian "shanty towns" where entire communities are built illegally. Usually these communities are developed by the favelados themselves which increases risk of structural failure and overall excessive horizontal densification of these places. Official policy is usually not followed.

9 Cortiços result from invasions of abandoned buildings. These are the home of vulnerable populations who are subject to eviction at anytime. Many of these buildings don't have basic services such as proper sewage, electricity or a functioning elevator. There are plenty of cortiços in SP's historic centre.

While plenty of city development decisions were taken in favour of the *elite population,* the *informal population* began to develop itself wherever space was available without city services or infrastructure. By 1990's planning proposals sought to integrate the land use but there were too many irregularities already (Moura et al., 2014, p. 142). In 2000, the Master Plan PITU2020 began to envision a polycentric city which was already taking place organically (Barbosa, 2001, p. 71).

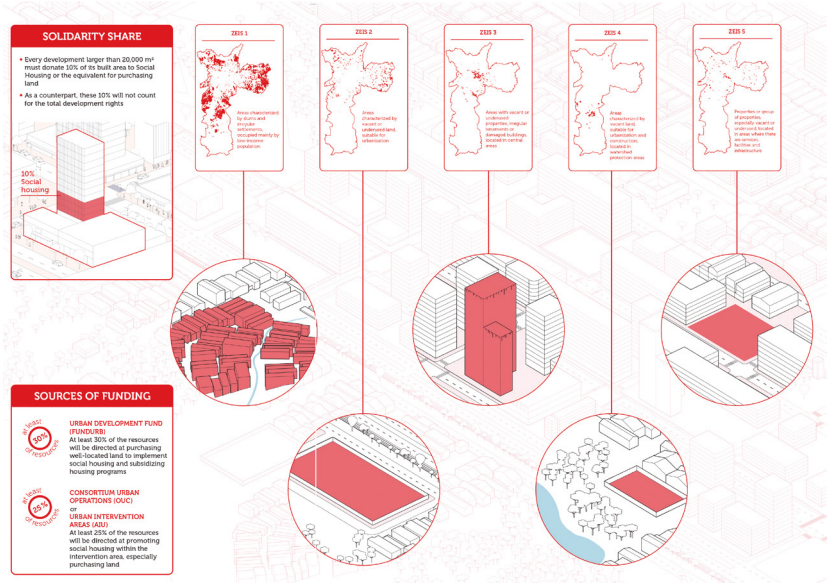


FIGURE 15 | São Paulo's Master Plan: Housing Policies
"Implementing Housing Policies For Those Who Need It The Most" (Department of Urban Development (SMDU), 2014, p. 6,7)

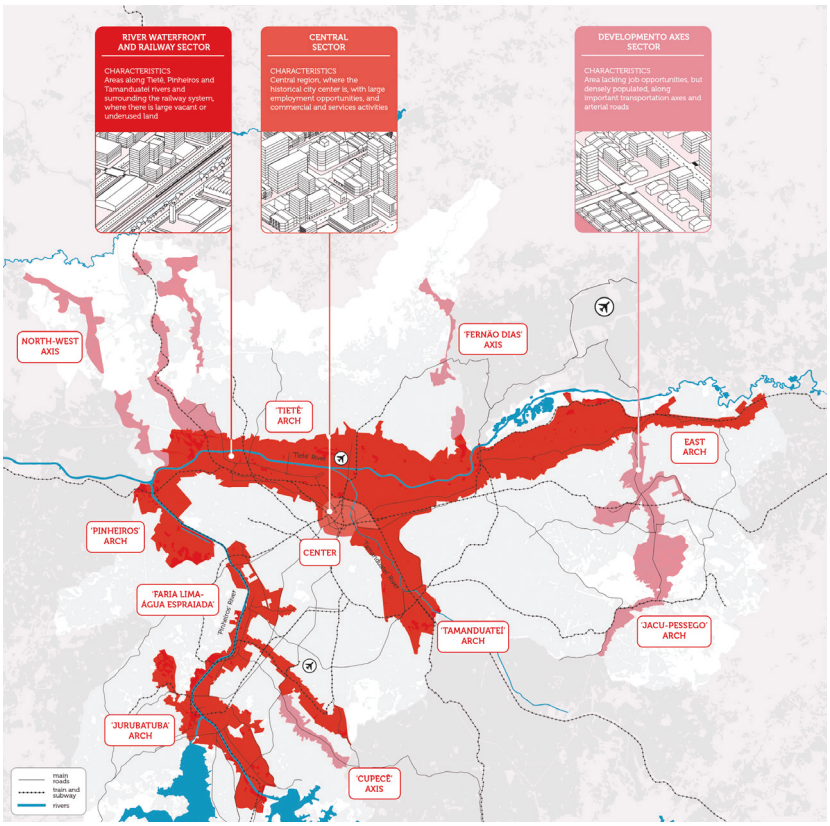


FIGURE 16 | São Paulo's Master Plan: Metropolitan Dynamics
"Reorganizing metropolitan Dynamics" (Department of Urban Development (SMDU), 2014, p. 14,15)

Over the past century SP has grown economically and demographically (Lajut, 2016, p. 29). Nevertheless, irregularities in its urban growth have led to an unhealthy situation in the city where about 70% of its population live in substandard informal housing (United Nations Human Settlements Programme (UN-HABITAT), 2010, p. 87). In addition to providing proper services in peripheral regions is the city's responsibility to provide adequate infrastructure, including access to mobility for all populations (Lajut, 2016, p. 116). Unfortunately, the informal city remains abandoned by the state to this day.

FIGURE 17 | Liberdade Neighbourhood from Two Perspectives (SP)
Homeless person sleeping (Left), same place two blocks away (Right) (Author, 2017)

Transportation

The first railroad for cargo shipment was established in 1850 (Barbosa, 2001, p. 46). New technology centralized SP at a regional level even more and urban clusters began to form at the various railroad stations. By 1900, electric trams arrived in SP (Barbosa, 2001, p. 54). The city seemed to have a lot of promise for adopting technological advancements. However, there was considerable regression in Brazil between 1930 and 1960 due to technological stagnation paired with a vision for industrialization. Between 1939 and 1960 road works -instead of railroads- were developed for regional connectivity. During the same period most public funding was allocated for developing a radial avenues plan –"beltway model" proposed by Prestes Maia in 1930 (Barbosa, 2001, p. 60) and "urban super highways" plan induced by Robert Moses in 1949 (Barbosa, 2001, p. 62)-. Intensification of the automobile industry was fundamental during these decades.

In 1920, about three-quarters of SP's public transit consisted of trams that by 1942 began switching to buses putting more demand on the road network. During this same period, there was a significant increase on the use of private vehicles. Loyalty to the automobile industry even shined through laws that made parking space mandatory for residential buildings in 1957 (Barbosa, 2001, p. 64).

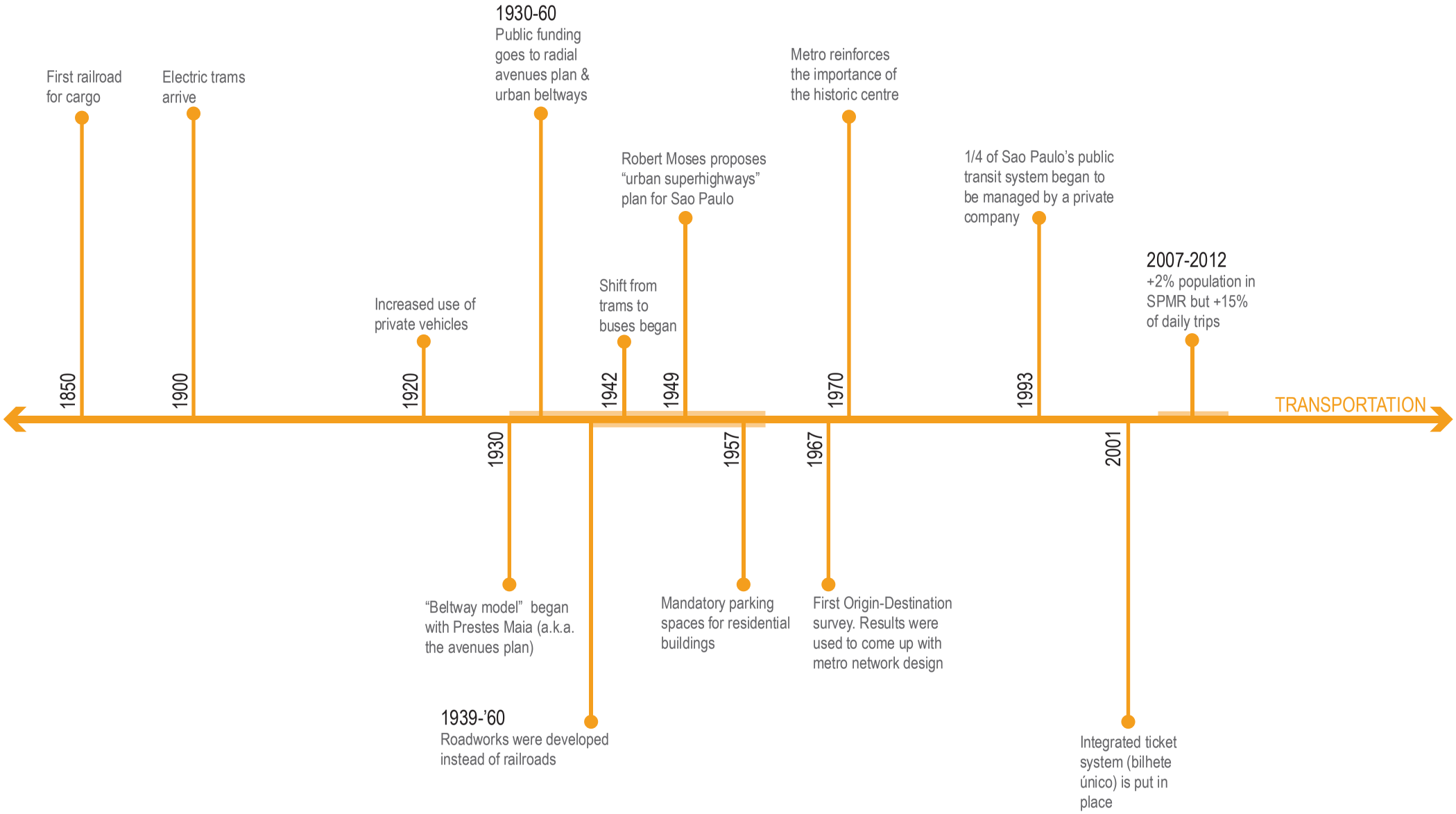


FIGURE 18 | Transportation Timeline
(Author, 2018)

The first Origin-Destination (OD) survey was done in 1967. The results were later on used for the development of the metro network in 1970 which reinforced the importance of SP's historic centre (Barbosa, 2001, p. 66). It took several decades to build up the metro network in SP, with line-4 (yellow) still under construction in 2018. Line-4 (yellow) was the first line to create a mesh effect in the entire network. The first metro line in SP was Line-1 (blue) finished in 1990 with 20.4km and 23 stations. The second was Line-3 (red) and third was line-2 (green). The complete metro network has 70km –note PITU2020 Master Plan indicated 282km-.

In 1993, public transportation began to be managed by a private company that shifted the way revenue was calculated. From that moment revenue was not measured by distance travelled but by square meters occupied per passenger. This meant for better business more people had to fit in fewer vehicles (i.e.: buses, metro or train).

FIGURE 19 | Public Transportation Vehicles in São Paulo
Left to Right: Historic Tram (Fagundes, 2008), Articulated Bus (Eduardo, 2017), Metro (Antônio [Interviewee], 2018.)

The results from a survey 2007-2012 noted a population increase of 2% in SP versus a mobility increase of 15%. People were making more trips that lead to question who were able to make these trips. Research showed a direct relation between the amount of salaries per family and their ability to move through the city. Population considered poor (less than three salaries per family) depended on public transportation and took significantly longer than those families earning higher salaries.

As pointed out by Bonduki's article on SP's urban development *"…in order to be universal, public transport should be able to compete on equal terms with the private car. Achieving this condition is a key challenge facing the new urban model to be implemented in São Paulo."* (Bonduki, 2011, p. 34). One way to understand what would make someone choose one mode over another –if given the freedom and opportunity- is studying the micro-elements of the journey (i.e.: individual perspectives). These can be –but are not limited to- personal space, security, reliability and comfort. With 43.7M daily trips in SPMR (Metrô/SP, 2012)[10], quality of the transit experience is an issue worth examining.

Combined Timelines

Figure 20 shows important events that overlapped over the last century. An unfortunate discrepancy between densification in SP's historic centre in 1920 and a "beltway model" urban plan in 1930 could only predict further issues of traffic for decades to come. Between 1940 and 1960, an industrial capitalistic model sought to glorify motorized private transportation. Road development absorbed most public transportation funds leaving riders with overcrowded and underdeveloped public transportation networks. Ramifications of these decisions further influenced social stratification in SP and SPMR.

10 Number of daily trips include collective, individual, motorized and non-motorized modes.

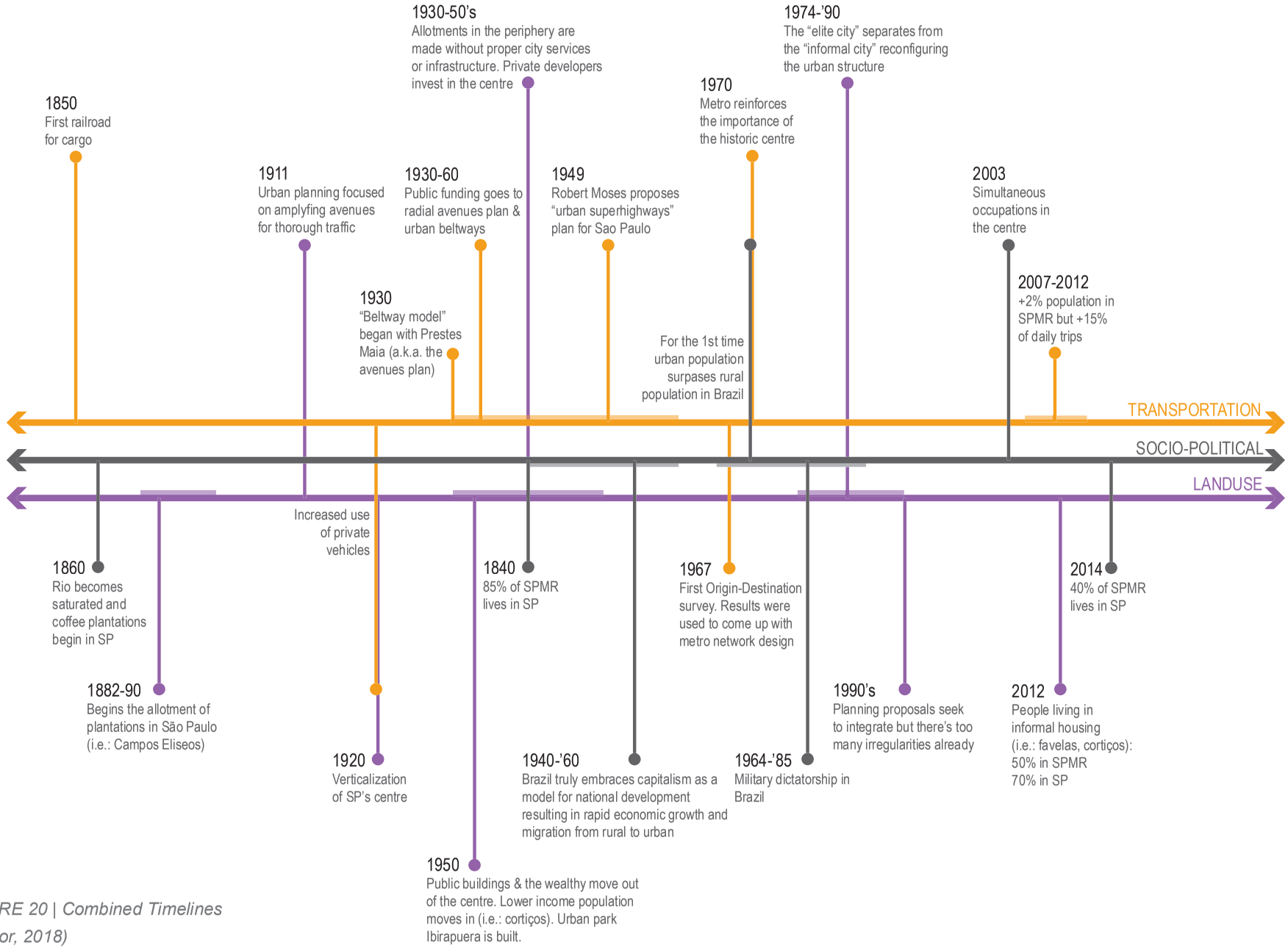


FIGURE 20 | Combined Timelines (Author, 2018)

We can appreciate briefly after the elite and informal city began to split from 1974 to 1990, planning proposals sought to reconcile but social exclusion issues were already too great. Further effects can be linked to the correlation between increments of forced occupations (i.e.: cortiços and favelas) in 2003 and number of people living in informal housing by 2012. Equally important to acknowledge was despite the population increase in SPMR overall, there was a significant smaller growth in SP compared to the peripheral municipalities in SPMR –SP's population grew by 90% while SPMR grew by 281% from 1970 to 2010 (Moura et al., 2014, p. 137)- although most jobs, services and infrastructure remained within the central region.

It is not my ambition to resolve all problems outlined in this section. Nonetheless I would like to examine the potential to improve people's life quality in the city via mobility development that is mindful of user's experience. Nowadays people continue to protest and reclaim their right to the city. Personally was able to experience these manifestations on two occasions (i.e.: 15.03.2017, 28.04.2017). During the events people talked about power differentials between the state and various social groups and their wish to be acknowledged as part of society.

FIGURE 21 | Protest of March 15 in Av. Paulista (SP)
(Author, 2017)

5 | RESULTS

5 | RESULTS

5.1 | MOBILITY AT A REGIONAL SCALE

The following macro-analyses based on the regional maps –combined with the timelines just presented- served as part of the quantitative research done prior to the micro-analyses based on the interviews. Before gathering data for the experiential quality of the built environment a study on origin-destination trips (OD 2007) was conducted for understanding issues that are more current for SPMR mobility. In order to address the research question –how does the development of global cities affect the experience of urban space?- it was important to understand the macro- (i.e.: historical and statistical data) and micro-elements (i.e.: individual testimonies) involved when travelling in SP.

Number of Trips per Day

Number of daily trips shows a significant demand from the periphery to the centre. Highest density of trips can also be appreciated in the shape of a cross. SP's expanded centre is almost completely urbanized, as shown by the areas shaded in grey. The extension for urbanization found in SP leaves little room for wild or natural areas within the city. In terms of recreation, few parks function as open public spaces since homeless and vulnerable populations reside in them. In the context of SP most parks become spaces for shelter rather than recreation. This further justifies my intention to examine transit spaces (ex.: sidewalks, streets, roads) for potential community building and citizenship.

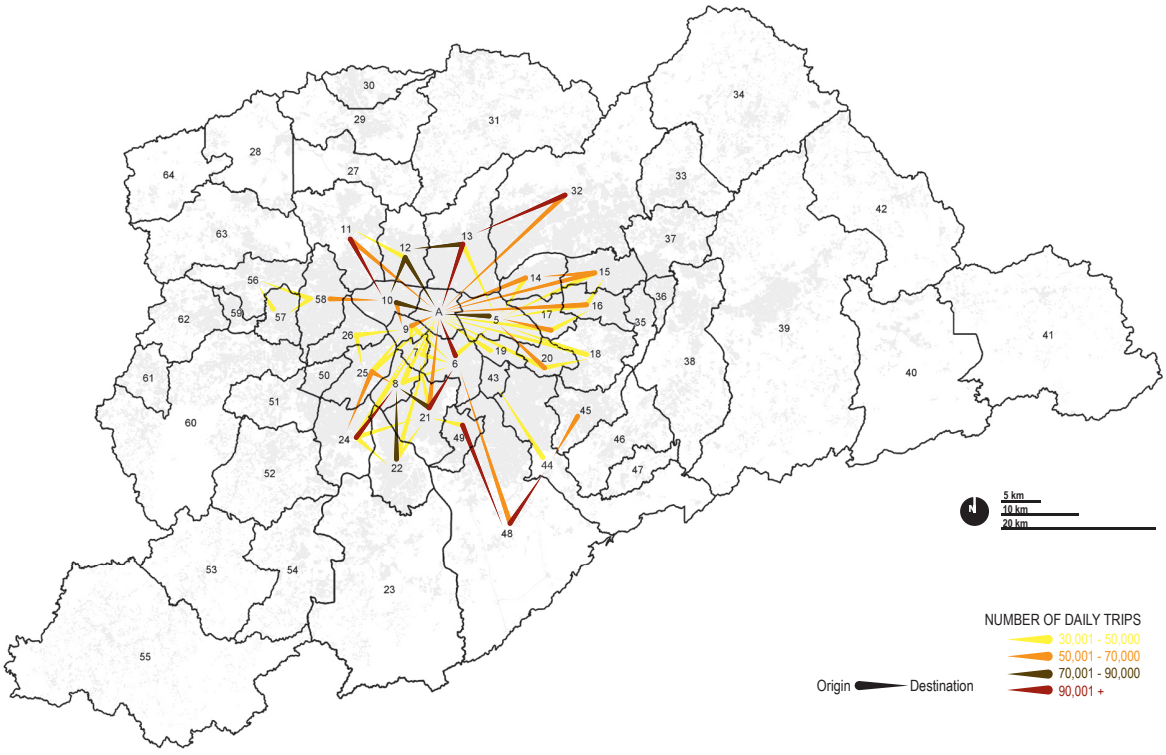
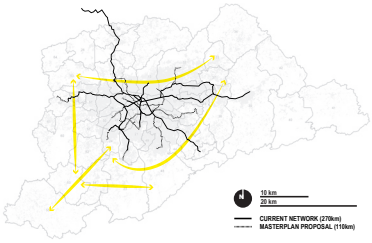


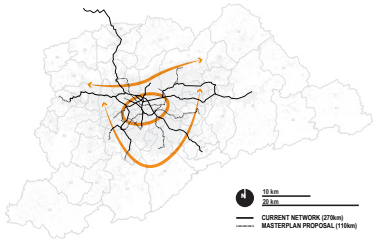
FIGURE 22 | Number of Trips per Day in SPMR
Illustration by Author (2017) based on Pesquisa Origem e Destino 2007 (metrô/SP). Municipalities are listed as A (centre), 5-64. A full list of names are part of the raw data and can be accessed if needed.

Mobility Tendencies

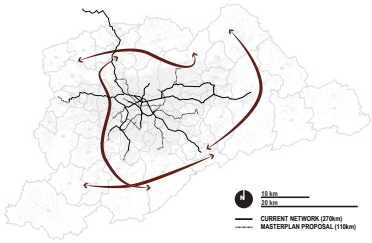
The maps displayed in figure 23 show tendencies in terms of volume of trips, knots, services, physical barriers, accessibility and integration in SPMR. Arrows illustrate deficiencies in each of the categories. Statistical data was obtained from Companhia do Metropolitano de São Paulo (Metrô/SP, 2002, 2007, 2012), GIS data was taken from Estate Government of São Paulo (Emplasa Governo do Estado de São Paulo, 2018) and the city of São Paulo (GeoSampa Prefeitura de São Paulo, 2017).



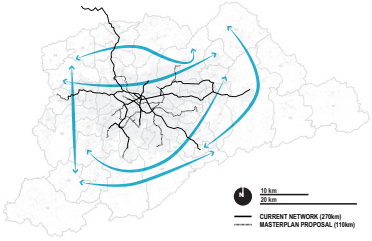
VOLUME · The yellow arrows show the destinations that need service due to the large amount of daily trips. The Southwest and Northeast peripheries are the ones with notorious volume and travel time.



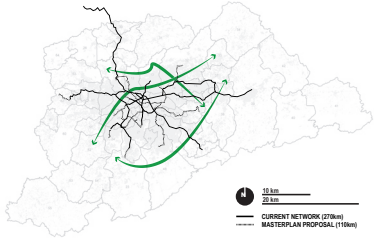
KNOTS · The orange arrows point towards the new forming knots in SPMR based on the volume of daily travel. The circle on the central area shows the already stablished knot of Sao Paulo's center.



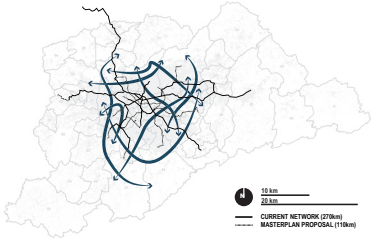
INTEGRATION · A transportation model that connects the peripheries could have a positive impact on overall urban integration. Even if counter intuitive to existing demand, this strategy could facilitate decentralization in SPMR.



PHYSICAL BARRIERS · Arrows point towards needed infrastructure due to divisions created by railways, forest reserves or significant changes on topography.



ACCESSIBILITY · Based on a study of current transit axes in the city, the green arrows show some possible routes that would service these axes (currently non-existent).



SERVICES · This analysis embraces the opportunity to introduce transportation routes that connect existing services already offered by the city (i.e.: schools, recreational and sports facilities, libraries, etc.).

FIGURE 23 | Mobility Analyses (Author, 2017)

Mobility within the peripheral areas of SPMR is almost non-existent. The centre of the city acts as a major connector between municipalities forcing a greater dependency on it to access areas of SPMR. An important observation inferred from the data analysed is the relatively moderate provision of services (ex.: schools, recreational facilities, health care institutions) outside of the centre of SP when most jobs are found within it. The massive displacement of new residential areas outside the centre and into the periphery also emphasize the need for better connectivity and accessibility in these areas.

Pendular Mobility and Population Density

The aim of this section was to understand the amount of people moving between municipalities and which ones were the most visited. Figure 24 shows population density with the darkest shade holding over 10,000 people/km2 and the lightest under 100 people/km2. Out of the 34 municipalities in SPMR, 79% of all mobility occurs in only 9 of them (Cunha, 2015, p. 285) . Municipalities with the most pendular mobility (i.e.: inter-municipal travel, or mobilidade pendular in portuguese) are highlighted in orange. Out of the 5 municipalities that hold

over 10,000 people/km2, only one is part of the 9 with the highest mobility in SPMR. This is related to issues of accessibility that is significantly low for households with less than three minimum salaries per month and peripheral populations.

Since not all pendular mobility is happening towards the center of SPMR one can visualize a new polycentric city creating mobility that is no longer centralized. After overlaying population density with pendular mobility data it was clear the highest mobility levels did not necessarily come from the densest municipalities proving issues of accessibility for some regions. Higher income regions are able to travel more than low-income regions given the discrepancy of options (ex.: bus/metro/train versus car/taxi/motorcycle).

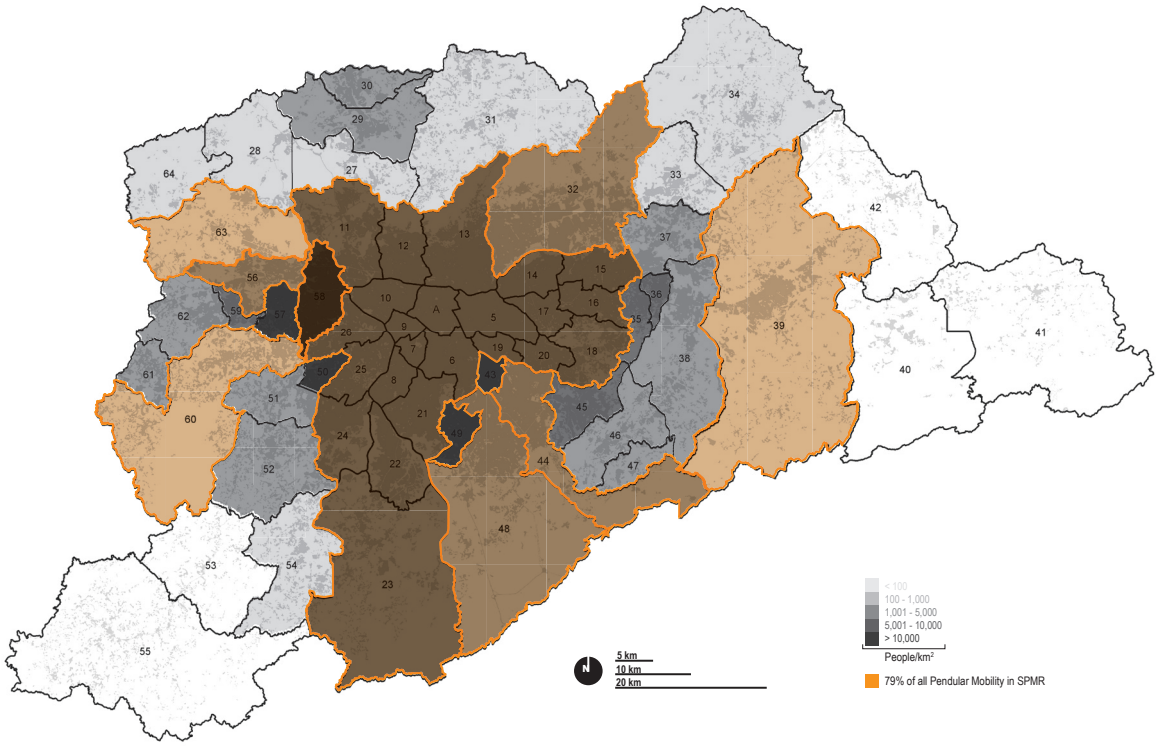


FIGURE 24 | Pendular Mobility
Illustration by Author (2018) based on Pesquisa Origem e Destino 2007 (metrô/SP), População Estimada & Base Territorial 2013 (IBGE) (Soares, 2014, p. 2). Chart with exact density quantities are part of the raw data and can be accessed if needed.

Trip Length during Rush Hour

Despite the new forming centers on SPMR, Macro-zone A (historic centre) is still the most common destination for people's daily commute as seen from figure 25. As an example of the commuting times, Macro-zone A was taken as a destination during morning rush hour for all 460 zones in SPMR . Colours green to red show commuting time increase from 20 minutes to over 2 hours (respectively) when travelling by public transportation. Macro-zone A has a high concentration of jobs making it a significant knot in SPMR. The isochrones on figure 25 demonstrate the long commuting times for public transportation users but it could also be interpreted as a reality for private transport users. This was supported by one of the interviewees who commuted from her home in Caieiras (Macro-zone 27, located on the North West side of SPMR) to Mackenzie University (Macro-zone A, located in Higienópolis) mostly by car. Bruna left home at 5h50 for an 8h class just to avoid peak hours of traffic.

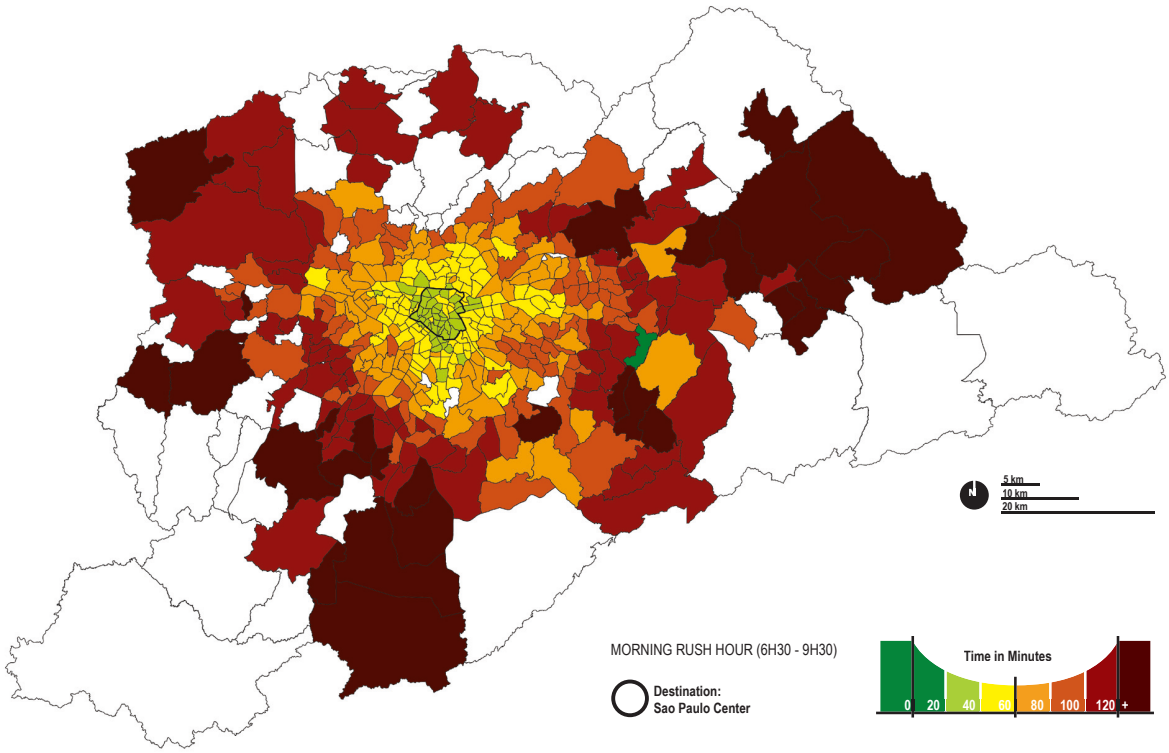


FIGURE 25 | Average Time for Daily Trips to the Centre
Illustration by Author (2017) based on Pesquisa Origem e Destino 2007. Viagens Diárias e Tempo Médio (min) por Transporte Coletivo de todas as Zonas para conjunto de Zonas do Centro (metrô/SP). Chart with quantities are part of the raw data and can be accessed if needed.

With the amount of jobs per person and services offered in the centre in contrast to the highly residential suburbs, is no surprise Macro-zone A has some of the worst traffic flows in the city. The commuting time map stresses the incredible pull the center has on the mobility network. Figure 25 further reinforces the link between proximity and commuting time. Given the density of daily travel in SPMR improving the quality of transit spaces could have a huge impact on people's life quality. Easing the accessibility and mobility between the various emerging centers in the periphery could also lower the travelling times.

After taking a close look at the macro-analyses, it became crucial to work with individual people to gain further understanding of the mobility experience in SP from qualitative data sources. The next section presents testimonies from six interviewees. Their personal experiences served as data for drawing conclusions in terms of the quality of transit spaces in the city.

5.2 | EXPERIENCING URBAN SPACES

The process began with a collaboration letter stating the objective, process, and handling of personal information. This letter was written in English & Portuguese and given to each interviewee. After agreeing to the terms, the process began with the picture taking. This exercise meant to capture the interviewee's journeys as seen through their eyes. The following week we met via video –or audio- call to go through their pictures, their perception of the spaces and events they visited. This was done via unstructured interviews of about 30 minutes.

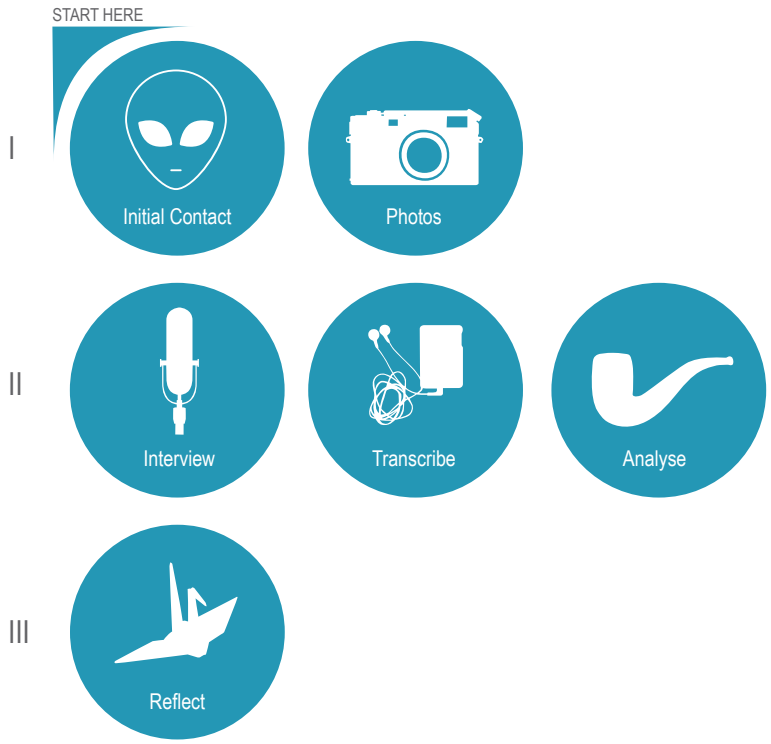


FIGURE 26 | Interview Process
(Author, 2019)

Prior to the interview, I prepared a set of guiding questions with topics such as biographical elements, physical elements, living spaces and networks[11]. These meant to guide the conversation for arriving at critical points for each interviewee's journey. The interviews were transcribed for a more accurate assessment and understanding of their journeys.

Mapping their journeys and photos formed part of understanding the mundane elements of the travel experience as presented by Cochoy et al. (Cochoy et al., 2015, p. 2268). Unveiling seemingly unimportant information during the interviews was a step towards understanding the user's experience and needs. This process was repeated for each of the interviewees where the intent was to acknowledge the disaggregating aspects (Magnani, 2002, p. 12) of the streets and use them for understanding the interdependency between the macro- (i.e.: statistics) and micro- analyses (i.e.: individual experiences).

Chapter 6 (Discussion) will lay out four different issues that emerged from the combined quantitative and qualitative analyses. This approach sought to challenge the potential for sense of place and sense of community (Francis et al., 2012, p. 401) as ramifications from to urban spaces that acknowledge user experience. Below are sketched avatars for the six interviewees[12].

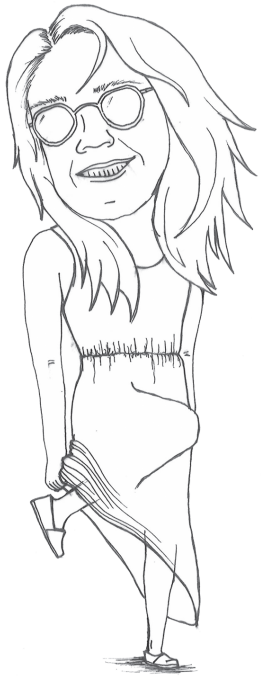
11 English version of this document enclosed in Chapter 9 (Appendixes). Interviews were conducted in Portuguese.

12 To protect their identity, names were changed and avatars sketched instead of using their pictures. All other data from the interviewees was kept the same.

LEONARDO
45, Professor

ANTÔNIO
24, Student

ANA
15, Student

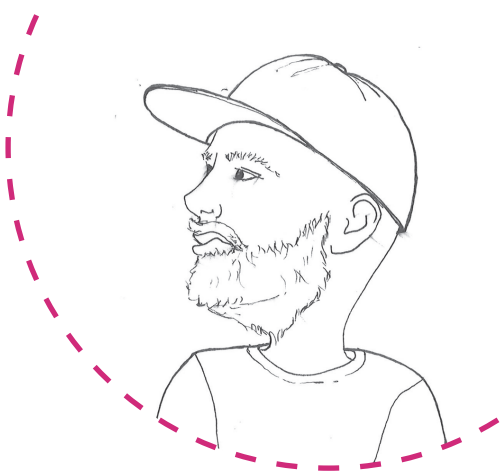


BRUNA
24, Architect and Urban Planner

THIAGO
45, Writer & Public Servant

MARCOS
27, Bartender

FIGURE 27 | Interviewees' Avatars (Author, 2019)



Leonardo

45, Male, Professor
Home: Rua Came, 983. Mooca, SP
Visits: Cerqueira Cesar
Transportation Mode(s): bike, sp-trans, foot

Commute and Photo Log

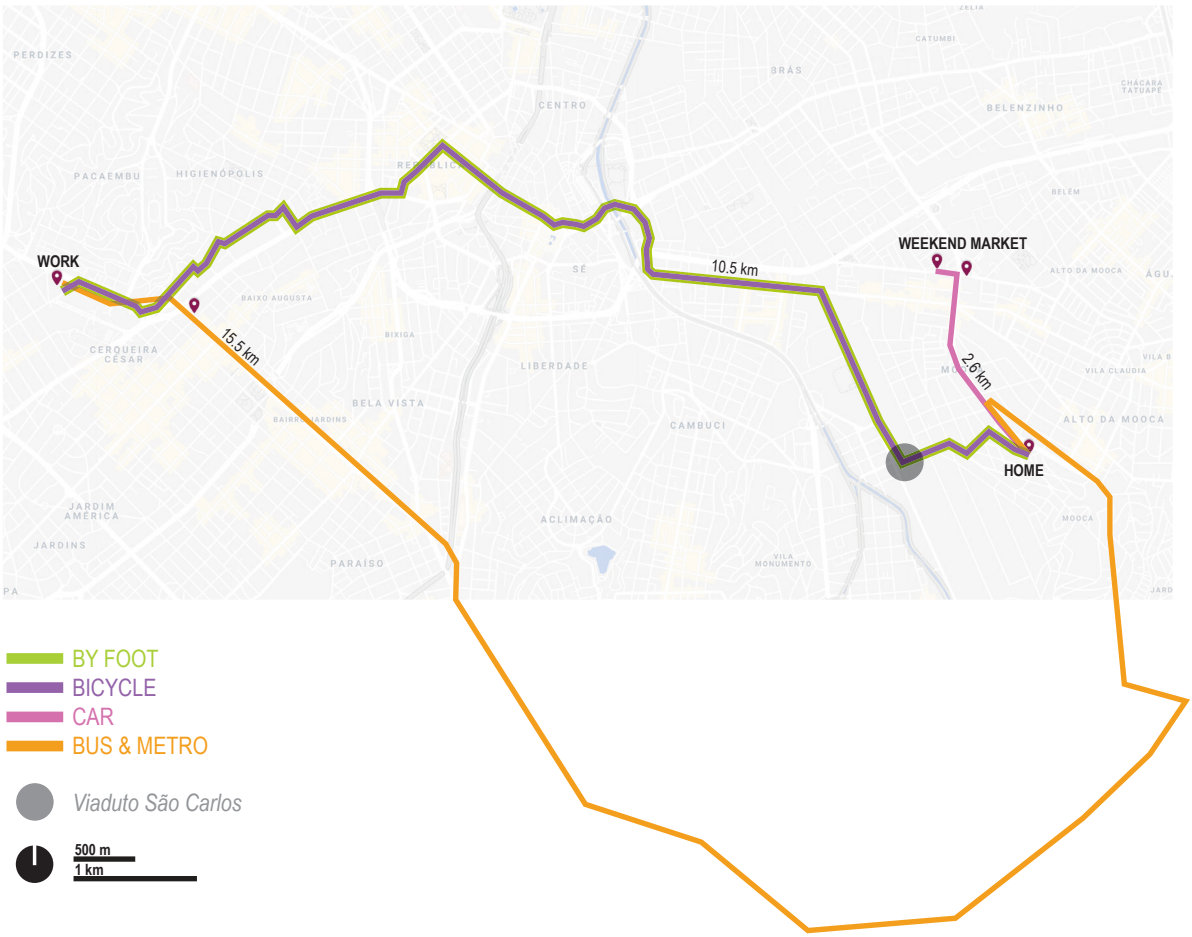


FIGURE 28 | Leonardo's Route
(Author, 2019)

Leonardo's home is about 8km from his workplace, when cycling this becomes 10.5km and with public transportation, the commute is 15.5km. The travelling time is about the same for both transportation modes, sometimes even longer when cycling given the grooming needed afterwards. The route taken by bicycle goes through the heart of SP as it has more biker friendly paths (ex.: less buses and wider sidewalks). SP's centre is predominantly historical with a pre-industrial built up. Government buildings resided there before moving to Ibirapuera Park.

During his interview Leonardo expressed he mostly enjoyed commuting by bicycle, however, this was not feasible on a daily basis. He expressed even though cycling actually took longer for him overall, it made him feel he was "living the city" ("vivendo a cidade" in Portuguese). Furthermore, Leonardo expressed his believe that active mobility (i.e.: cycling) humanized people while inactive mobility (i.e.: public transportation or driving) dehumanized people. He constantly expressed fear of getting hurt in a car accident as his biggest concern and

freedom of movement as his biggest asset with the bike. At the same time, he expressed how this freedom was lost when moving by car.

The issue of small voids within the city, as expressed by Leonardo, emerged from SP's rapid urban growth, followed by industrialization and then deindustrialization. This relatively rapid shift between job supply and demand transitioned into a tertiary economy that has harvested service jobs in SP while eradicating industrial labour jobs. According to Leonardo, many places in the city were left behind, abandoned and deteriorated. His home is close to some of these voids (ex.: cargo train tracks and warehouses) which make them a vivid part of his life as a resident of SP.

In his photo log, Leonardo showed pictures of his commute by public transportation but did not give this mode much interest during our interview. He expressed utter rejection for driving given the mobility restrictions within the city centre (ex.: traffic and parking issues). Nevertheless, he acknowledged driving brought convenience to his lifestyle on occasion. Sunday (22.04) was the only day he logged the use of the car. During this day, he took his kids to see their grandparents. Leonardo said when moving with the family convenience takes shape via car mobility.

The pictures highlighted on figure 30 show some issues -or critical points- that surfaced during the interview. Avenida Paulista was one of the places most mentioned by Leonardo, parts of it are shown in three out of the five pictures highlighted from the photo log. Leonardo seemed to have few issues being alert while travelling and more issues with vulnerability due to the absence of proper cycling routes. Vulnerability manifested via traffic pressure or absence of people around the industrial voids of the city.

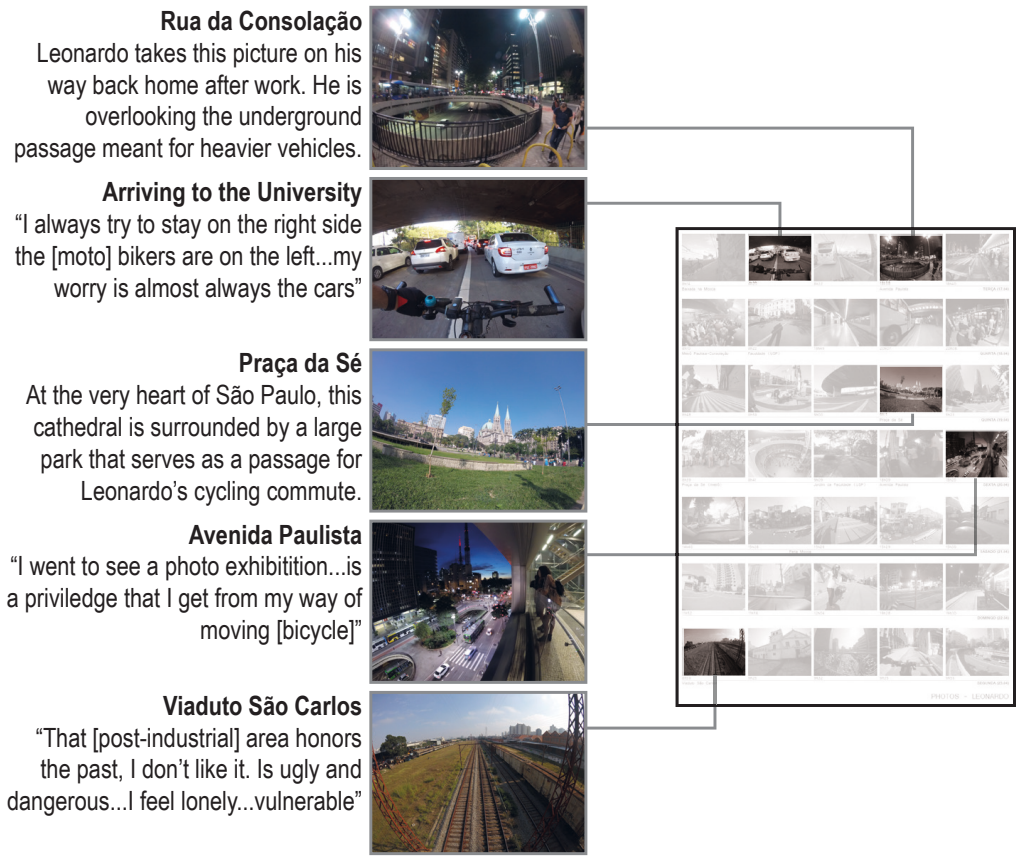


FIGURE 29 | Photo Log Highlights, Leonardo
(Complete Photo Log for all Interviewees in Appendix)

Mobility Experience

The picture and journey analyses showed Leonardo's main issue emerged from finding a place in the street as a cyclist and how the absence of this amplified his vulnerability and risk. It made me think whether or not different vehicles could share the same road safely and further question whether cyclist could benefit from existing infrastructure in the city. Viaduto São Carlos (shown at the bottom left of figure 29) was a critical point in Leonardo's journey given the lack of available space for the various transportation modes coexisting in the same road. In addition to the vulnerability caused by heavy traffic, the absence of pedestrians and overall feeling of loneliness coming from the industrial road increased his sense of insecurity. Viaduto São Carlos is about 15m wide with sidewalks on both sides about 1m. The sidewalks have small trees planted. These interrupt the flow for non-motorized traffic. Leonardo goes through this site when he bikes to work.

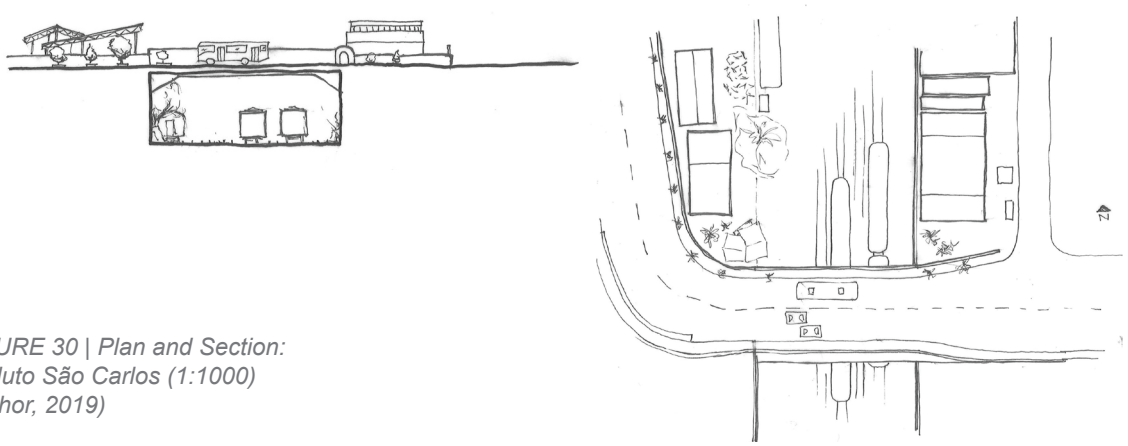


FIGURE 30 | Plan and Section: Viaduto São Carlos (1:1000) (Author, 2019)

Leonardo's biggest reward from cycling seemed to be able to "live the city". It would be interesting to find typologies that could further promote his engagement from cycling. Perhaps even utilizing the cosmopolitan quality found in other areas of SP to foster freedom of movement in a relaxed transit space. Industrial voids said to be problematic areas from his perspective given the feeling of loneliness provoked by these areas. Inevitable large scale of these industrial voids seemed to contradict its compatibility for being adjacent to residential areas in the city.

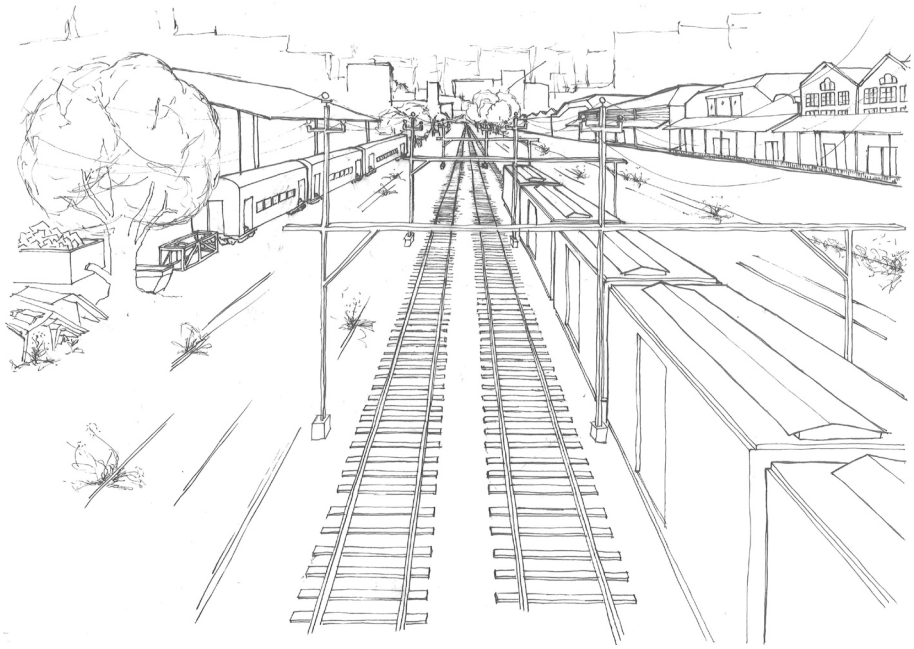
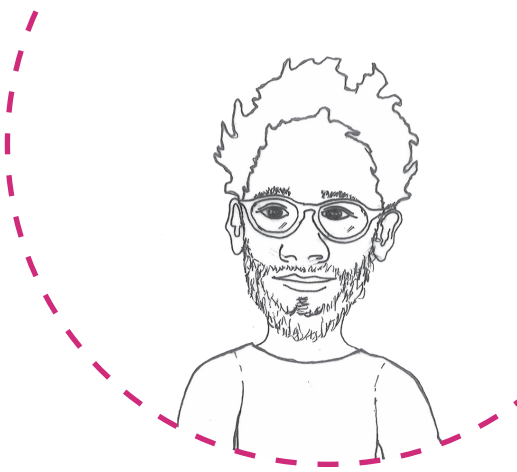


FIGURE 31 | Perspective: Viaduto São Carlos (Author, 2019)



Antônio

24, Male, Student
Home: Rua Correia de Lemos, 318. Chácara Inglesa, SP
Visits: Saúde, Vila Mariana, Butantã, Sé
Transportation Mode(s): sp-trans, car

Commute and Photo Log

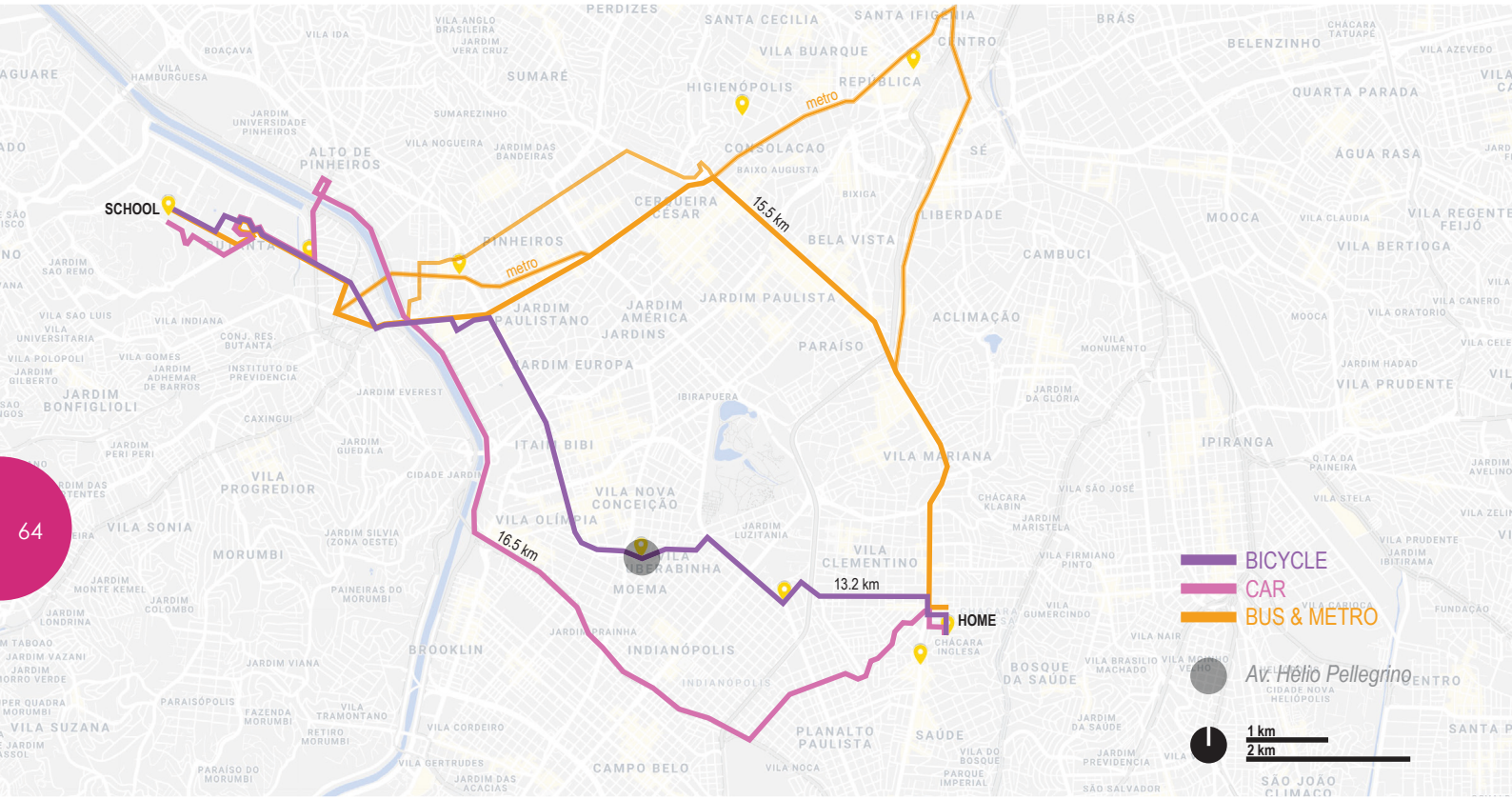


FIGURE 32 | Antônio's Route
(Author, 2019)

Antônio's home is about 11km from his university. The commuting time varies greatly depending on the transportation mode; sometimes he can take about 90min by bus or 60min by bike or car. As shown in figure 32, his routes vary, even by public transportation there are many different ways to his university. Out of the 7 days he logged, Antônio commuted 5 times by public transportation, once by bike and once by car. He said he really enjoys cycling but is not feasible given the lack of a continuous cycling network in SP and his concern for safety.

During our interview, he talked about the quality of the sidewalks in the city. Antônio said their consideration as private property for maintenance purposes but public spaces for functional purposes was problematic. This incongruence creates deficiencies in the maintenance of sidewalks overall, especially for those neighbourhoods with low-rise buildings (ex.: single-family homes). In the case of smaller buildings, the owners usually do not have the economic means –or will- to invest on a sidewalk over which they will not have legal ownership. As a result, sidewalks become a kind of "no man's land" where people need to open their own way for transiting through ("faço meu trecho" as mentioned by Antônio in Portuguese).

Quite often Antônio mentioned commerce and its ability to bring life to the streets for “no apparent reason”. He even preferred to ride a bus that would take longer to his university but would go along narrower streets with small shops. This way he could enjoy the view while moving. In comparison to Leonardo, we can see Antônio’s experience with the street is more invested in his flow through space as opposed to “living the city” through active mobility engagement. In this case, Antônio enjoys his role as spectator of city life. This brings importance to the materiality of the roads, signage and how these elements came together to make these transit spaces function.

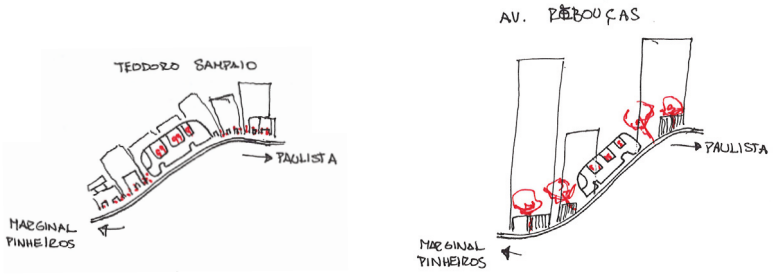


FIGURE 33 | Sketch: Rua Teodoro Sampaio & Avenida Reboucas
(Author, 2018)

Figure 33 shows two parallel streets on the way to one of Antônio’s destinations. Rua Teodoro Sampaio is equipped with low buildings and small shops while Avenida Rebouças is equipped with high-rise buildings and wide roads with a bus-only lane. Antônio would take at least twice the amount of time to transit via Rua Teodoro Sampaio although this is the path he prefers due to its liveliness compared to Avenida Rebouças.

In terms of people flow, Antônio described the corridor between metro stations Paulista and Consolação utterly terrible. In this case, he was not referring strictly to the actual space of the corridor but he felt uncomfortable with the design solutions for people’s flow. He described the improvised boundaries dividing people in the metro’s interior only create friction in the spaces instead of making it more comfortable for transit.

FIGURE 34 | Paulista-Consolação Metro Station
Photos taken by Antônio (Left) & Leonardo (Right) (2018)

The last sketch on the right of figure 35 illustrates the bridge over passing Marginal Pinheiros (expressway). This is an example of a poorly designed space dangerous for those who are moving by foot or bicycle. The space forces the users to mix with the overall traffic flow making people more vulnerable to accidents. A picture of this bridge is also shown in Antônio’s photo log on the bottom left. This bridge is transited by cyclists, pedestrians, cars, buses and motorcycles; it is also a main connection to his University (USP).

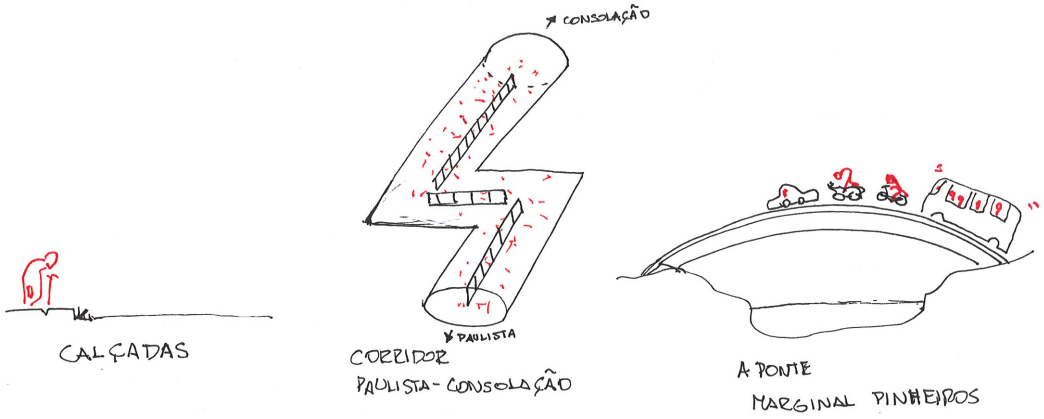


FIGURE 35 | Sketch: Critical Points (Sidewalks, Corridor and Bridge)
(Author, 2018)

Another critical point during the interview was Av. Dos Bandeirantes, which Antônio reported as congested in the morning. He takes this route when cycling or driving. There are no cycling lanes in this avenue so he said is normal for him to bike between cars while they stop in traffic. Naturally, this avenue has a conflict of space where is inconvenient for either motorized or non-motorized vehicles to transit.

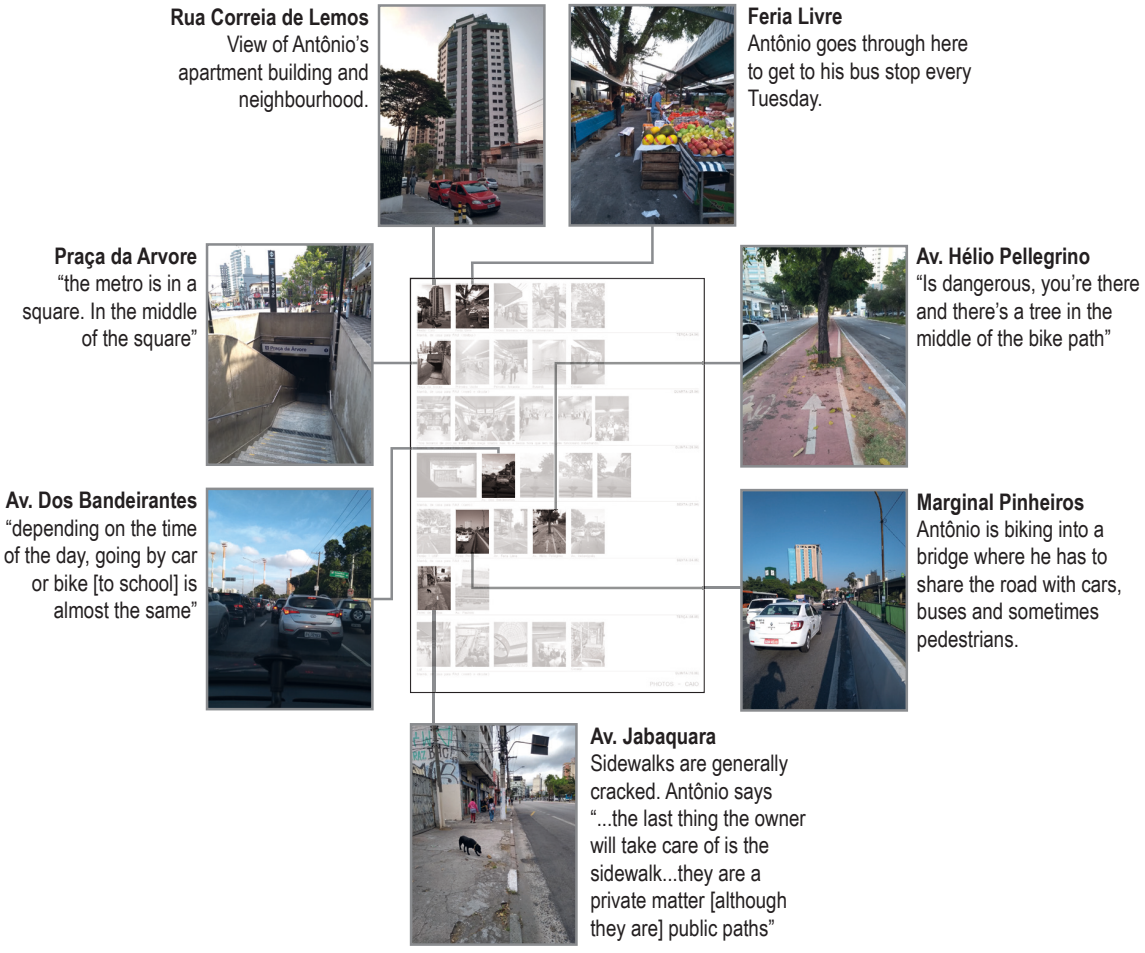


FIGURE 36 | Photo Log Highlights, Antônio
(Complete Photo Log for all Interviewees in Appendix)

Mobility Experience

Antônio's engagement with the street occurs through textures, materiality and slight engagement with other people and venues that brings emphasis to the pedestrian or cycling experience. On one hand he enjoys cycling and even uses some of the cycling paths in Avenida Hélio Pellegrino, however already there we can spot major problems (ex.: tree emerging from the middle of the path). Vegetation can be a positive addition to urban elements but in this case does not add to a pleasant cycling experience.

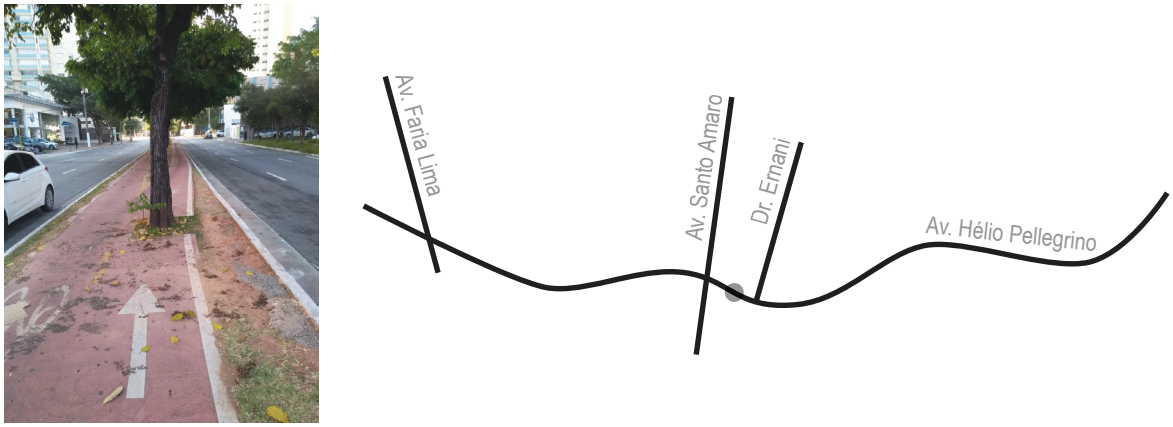


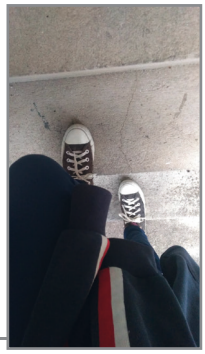
FIGURE 37 | Vegetation Barrier in Avenida Hélio Pellegrino
Picture taken by Antônio during his bike ride (Left), location of vegetation barrier (Right) (Author, 2018)

Ana

15, Female, Student
Home: Rua Marcelo Muller, 760. Vila Independencia, SP
Visits: SP
Transportation Mode(s): sp-trans, foot

Commute and Photo Log

Av. Prof. Luiz I. Mello
"Everyday is similar because is really crazy. Also, I don't know how to get around by myself..."



Arriving at Home
"this picture is when I'm at home which is a more sane moment...basically when I'm switching places"

Rua Marcelo Muller
Industrial Street by Ana's home. Here she's driven by her parents to her morning school.

Bus heading Home
"I get off at a stop close to home and my parents pick me up with the car, they also pick up my 2 sisters and we all go home together"

Bus to Brás
"is really safe [by bus], I think is better than going by metro"

FIGURE 38 | Ana's Route and Photo Log Highlights (Author, 2019) (Complete Photo Log for all Interviewees in Appendix)

Ana's daily commute is about 17km round trip given her mobility options. She goes to two schools every day, her morning school is a regular high school whereas her afternoon school is specialized for college preparation; there she takes chemistry. At about 7h she leaves home with her parents, they drive her to the first school about 2km north from home. At 12h Carolina heads to the second school during her 60min break. Although the distance is about 5km she does an average of 8km by bus. At 17h30 she heads home where her parents pick her up from the nearest bus stop around 18h30. They pick up her two sisters and the whole family drives home together. This routine happens from Monday to Friday.

During her interview Ana stressed her daily routine happens quite fast and she has to always be on the move. Most of her "solo" interaction with the street takes place immediately around her schools –unfortunately no pictures near those areas were logged-. At one point she expressed her quiet moments are mainly when she is switching from place to place or arriving at home. She also mentioned this routine was new to her.

On Saturday, Ana went to Brás shopping district with her dad by bus (distance of 12km). While taking about mobility in Brás, Ana mentioned the lack of accessibility for people on wheelchairs –or just wheels-. That day she was wearing sneakers with roller blades on the sole so she found herself in greater need of ramps and elevators but had difficulty finding any.

Out of all of the places she passed in her commute Ana mentioned liking Museu de Ipiranga which is a historic space in SP. She enjoyed the monumentality, openness and crowdedness of the place. Later on, we talked about the difference between the two schools she attended. Ana described the first school as closed in terms of its structure, it sounded almost like a fortress. The second school, Ana described as more liberal -or open- even though students swiped a card to access the school had many ways to enter. The location of the second school was more commercial whereas the first school was located in a residential area. In a way, their structure reflected their surrounding contexts.

Towards the end of the interview, Ana talked about her home which is located in an industrial street. She mentioned during the weekdays (7h-16h) is busy, crowded and noisy; giving her a feeling of security. However, after shops close, the lack of people in the street increased her sense of insecurity. As few families reside in Rua Marcelo Muller there is little interaction –or sense of community- between them.

Mobility Experience

Ana's experience with the street happens on the urban contexts immediate to her schools. These are the moments when she is partially by herself and is consciously interacting with the city on a daily basis. No pictures where logged about her schools but during the interview she would refer to these contexts a lot given her lifestyle. She described her neighbourhood as a nice place but Rua Marcelo Muller -her home street- was not quite pleasant to walk by due to its excessive commerce and industry. This was the second time –after Leonardo- that adjacency of industrial to residential areas presented a problem for the user from a pedestrian or cyclist perspective.

Industrial areas are not inherently suitable for community living (ex.: long wall east of Rua Marcelo Muller protecting the dumpsite) but a different perspective of the neighbourhood could create a new interest from residents. It was understood from the interview and pictures taken that active mobility (ex.: walking) was appealing to Ana. The axonometric drawing in figure 39 highlights Ana's home in pink. Perhaps in a neighbourhood that is fragmented by incompatible land uses enhancing better mobility could imply knitting fragments for community building in the area.

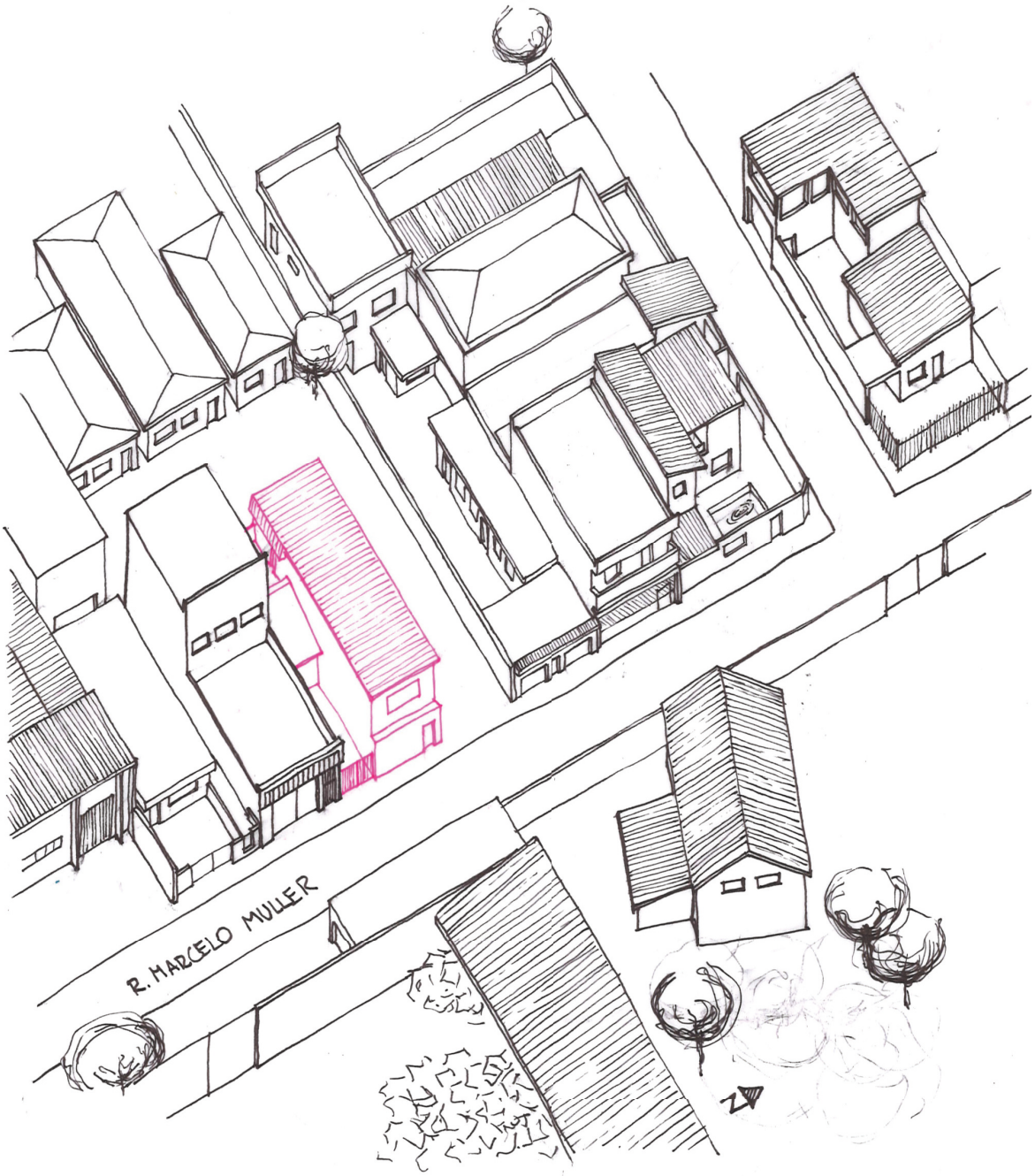
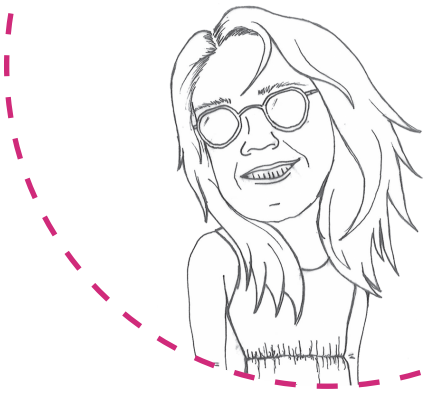


FIGURE 39 | Axonometric Drawing: Ana's Neighbourhood (1:500)
(Author, 2019)



Bruna

24, Female, Architect and Urban Planner
Home: Rua São Cristóvão, 145. Jardim São Francisco, Caieiras
Visits: Higienópolis, Santa Cecília e Pacaembu (SP)
Transportation Mode(s): car, foot

Commute and Photo Log

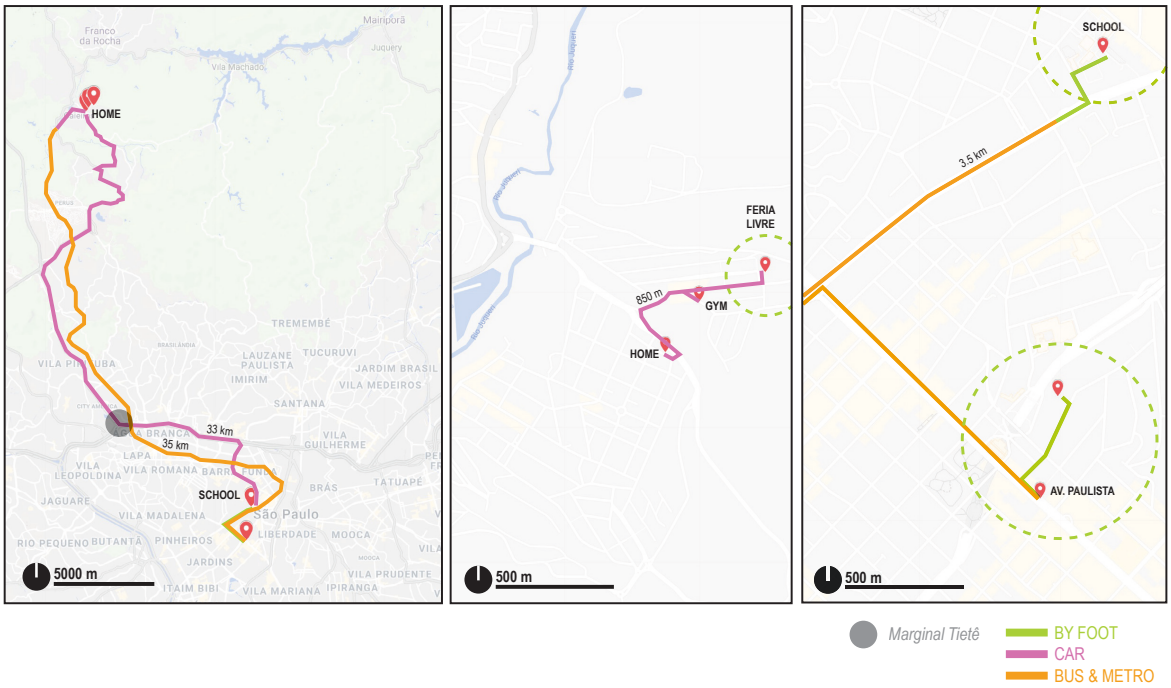


FIGURE 40 | Bruna's Route
(Author, 2019)

Bruna's round trip to SP's centre is about 66km by car or 70km by public transportation. She does this 4 times per week because of her classes. Commuting by private car or public transportation can be quite similar time-wise depending on when she leaves home. To avoid traffic she departs at 5h50 for her 8h class. She takes about 50min to arrive to her university. While she waits for class she goes to a bakery, has breakfast and studies.

During the weekends, she stays at home in Caieiras and visits the Feria Livre (weekend market) on Saturdays with her mom. Bruna expressed a high regard for safety and community living. She enjoys having a connection with the city by interacting with people though this is not possible often given her lifestyle. In addition, she described her home neighbourhood as mainly residential. In a way, she was glad to say most people know each other but the area gives a sensation of danger at night because of the empty streets.

Figure 40 shows three maps at two different scales. The first one shows her commute to SP's centre from home, the middle one is a close up of her neighbourhood and the right is showing the area around her university and Av. Paulista. Even though the distances around her neighbourhood are quite short, Bruna expressed her dependence on driving. Lack of people walking on the street increased her perception of danger. In this case, the car was not only a transportation mode but also a shield.

Bruna's relation with the city seemed to happen when walking or driving hence the importance of sidewalks in our conversation. She enjoyed shorter walks with vegetation, rest stops along the way and relief on buildings to break the rigidity of long blocks. This could be a reflection of her liking for community living where smaller scales are more comfortable when transited by foot.

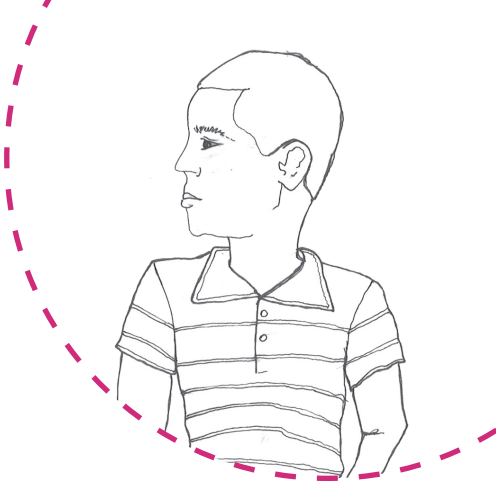
FIGURE 41 | Photo Log Highlights, Bruna
(Complete Photo Log for all Interviewees in Appendix)

Mobility Experience

Moving mainly by car, Bruna has a challenge in balancing comfort, safety and inclusiveness with the city. As expressed during the interview, extensive car use fosters her isolation which is something unwanted by her although being sheltered by her car increases her sense of security. Is a challenge to reduce the need for an isolator and protector vehicle but, how could the build environment address these issues?

Bruna talked about Marginal Tietê expressway when she is entering SP's centre as a surreal experience where noise, smell and traffic combine into chaos for her as a car driver. One obvious challenge is to revitalize the Tietê River that has an unpleasant smell even though there are existing parks nearby. Perhaps Tietê River is not suited for people but better suited for wildlife if maintained. Madrid's Rio Park, for example, started as a project to clean the Manzanares River. The first steps -before designing an urban park- involved making the Manzanares River a suitable environment for birds.

Improving Bruna's mobility experience involves safety and inclusion that cannot be addressed with an unpleasant environment (i.e.: sewage smell and pollution). Analyses from her experience raised issues of sanitation and environmental preservation. A first step so Bruna as a car driver could have the opportunity to enjoy entering SP.



Thiago

45, Male, Writer and Public Servant
Home: Alameda Tietê, 312. Jardim Paulista, SP
Visits: SP - Centro
Transportation Mode(s): sp-trans

Commute and Photo Log

Thiago did not wish to be interviewed but agreed to write a daily log of his commute and answer a questionnaire at the end of the week. His journeys consisted of home to work (USP) commutes from Monday to Friday. Thiago does not own a car and considers cycling in the city extremely dangerous. As such, he walks or takes public transportation for his daily mobility needs.

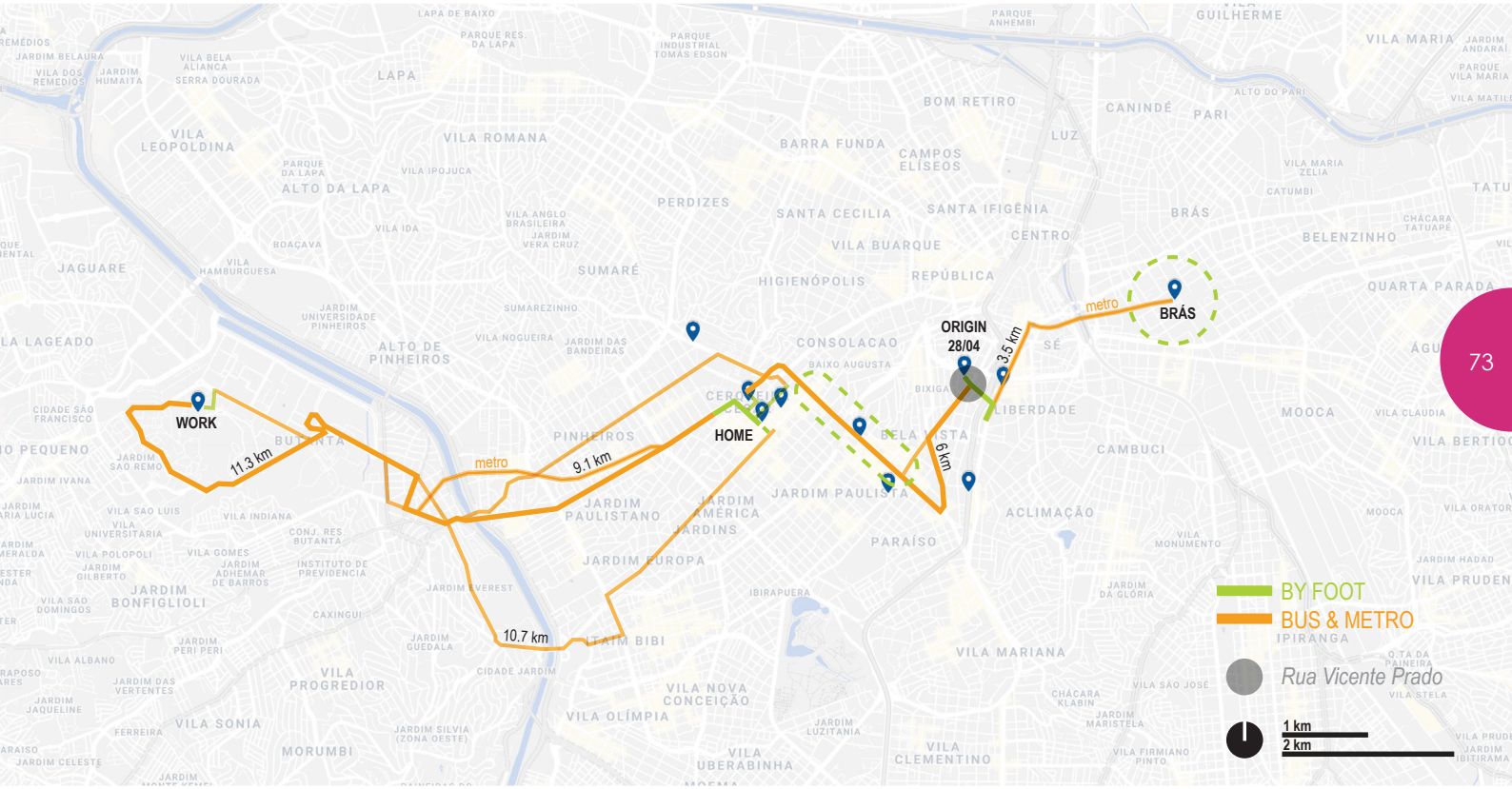


FIGURE 42 | Thiago's Route
(Author, 2019)

A round trip from home to work is between 18km to 23km depending on the route. As shown in figure 42, most bus routes pass through the Pinheiros River making it a "bottle neck" for traffic flow. Thiago's daily commute is about 150 minutes round trip. He says his journeys are usually relaxed except for the excess passengers riding the bus that make the space feel quite crowded. Comfort is one of the main challenges, in Thiago's perspective, when taking public transportation due to overcrowded vehicles. Sometimes, he also goes into "autopilot mode" when reading a book.

During the weekend, his origin and destination trips changed significantly from his work-home journeys. On Saturday (28.04) Thiago had a relatively short trip to Brás (3.5 km) then back to a new place (Bela Vista

neighbourhood) and then home. Whenever his walking experience involved leisure -as shown in his photo log- this would occur in crowded spaces with some sort of cultural or commercial venues. Even though most origin-destination (OD) trips were not intended as recreational, Thiago was very perceptive of his surroundings, which can be appreciated through his personal notes and pictures.

FIGURE 43 | Photo Log Highlights, Thiago
(Complete Photo Log for all Interviewees in Appendix)

As part of the questionnaire, Thiago was asked about changes and evolution in the city for the last couple of decades. He mentioned intense densification and verticalization all over SP intended to respond to population density in the city although during this process the streets' size remained fairly the same. This had a ripple effect in the inevitable reduction of public spaces and increased traffic which, as mentioned by Thiago, further dehumanizes the urban space –in his notes Thiago expressed the need to "humanize the city" ("humanizar a cidade" in Portuguese) given its current state-. According to Thiago, the reduction of public spaces in high-income neighbourhoods ("bairros nobres" in Portuguese) has been notorious over the last few decades. He mentioned real state "hoarding" over city plots and informal building (i.e.: favelas, cortiços) have intensified with the years. This presents a bigger challenge for improving the quality of the streets in neighbourhoods with informal development.

In regards to infrastructure, Thiago mentioned higher income neighbourhoods have usually higher quality sidewalks and few problems in general regarding their infrastructure. He even drew a comparison between areas in Avenida Paulista and Rua Vicente Prado (Bela Vista neighbourhood). Despite being adjacent to a "noble" area, Rua Vicente Prado shows low quality –or lack of- public spaces (ex.: sidewalks). Thiago mentions lack of maintenance, uncollected garbage, homeless people, informal sellers, random advertisement boards

and posts as elements lowering the quality of sidewalks.
The main issue for higher income neighbourhoods (which is where Thiago resides) appears to be designated spaces for public use free from financial implications (ex.: open areas for cultural and recreational value instead of only shops and restaurants). Avenida Paulista nearby adopts the function of a big urban park on Sundays but everyday cultural and recreational open spaces are lacking in Cerqueira César (Thiago's neighbourhood). When asked about challenges in terms of urban development, Thiago mentioned bureaucracy, bad administration and misallocation of funds as important contributors to the lack of public space development in SP.

Mobility Experience

Thiago offered the perspective of someone who relied on a public transportation network. He mentioned the "supremacy of the automobile" as an unfortunate reality in SP because most of the investment goes towards development for motorized transportation. On the other hand, most private funds head to real estate, leaving the streets as a grey area in the city.

Reflecting on Thiago's experience, narrower streets due to excessive private space appropriation become a significant issue for safely enjoying the streets. In light of improving the quality of the streets as public spaces I wish to express the importance of pushing back physical boundaries on narrow streets to open up a common space for the community (ex.: sidewalks).

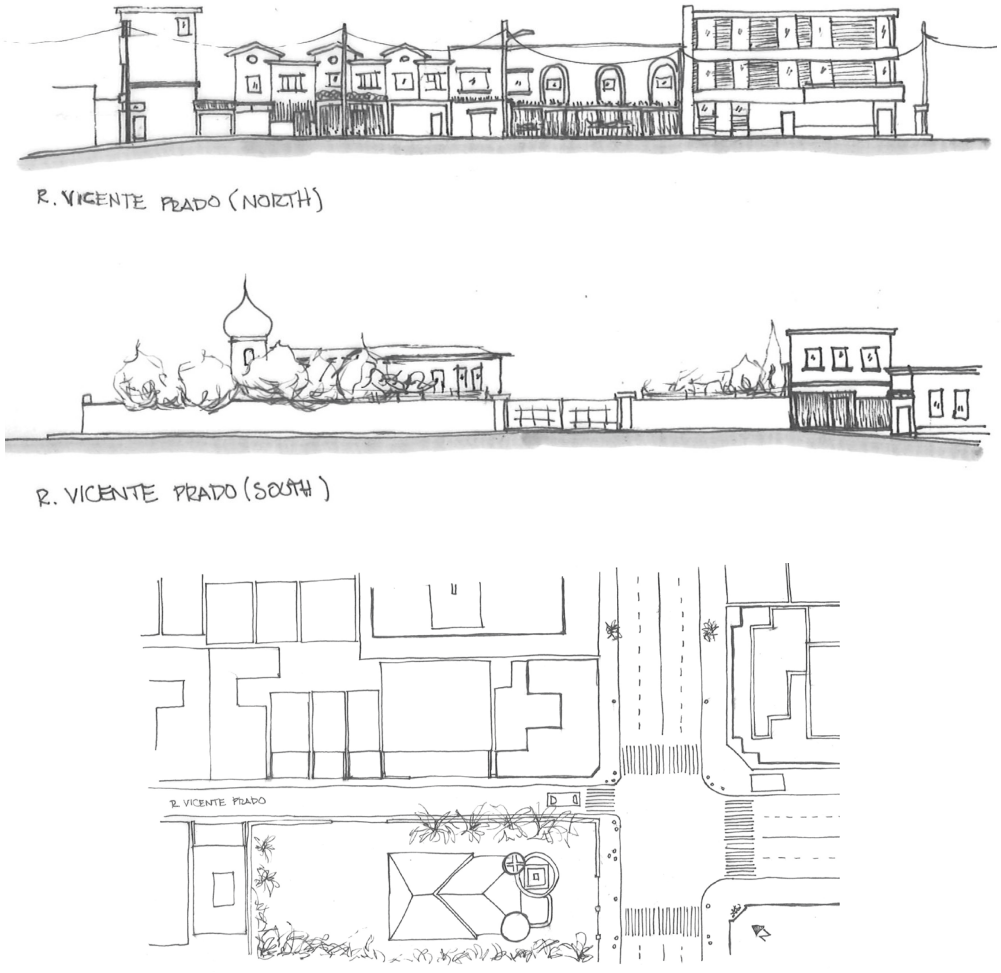


FIGURE 44 | Plan (1:1000), North and South Elevations (1:500), Rua Vicente Prado (Author, 2019)

Rua Vicente Prado, for instance, is relatively short, narrow and opens up to one Avenida Brigadeiro Luís A. This was one of his leisure destinations during the weekend (Day 30.04). At the moment Rua Vicente Prado has one lane open for motorized vehicles and extremely narrow sidewalks on both sides –about 1m (north) and 0.5m (south)- Lamp and electric posts also interrupt a clear path in the sidewalk so many people walk on the road itself.

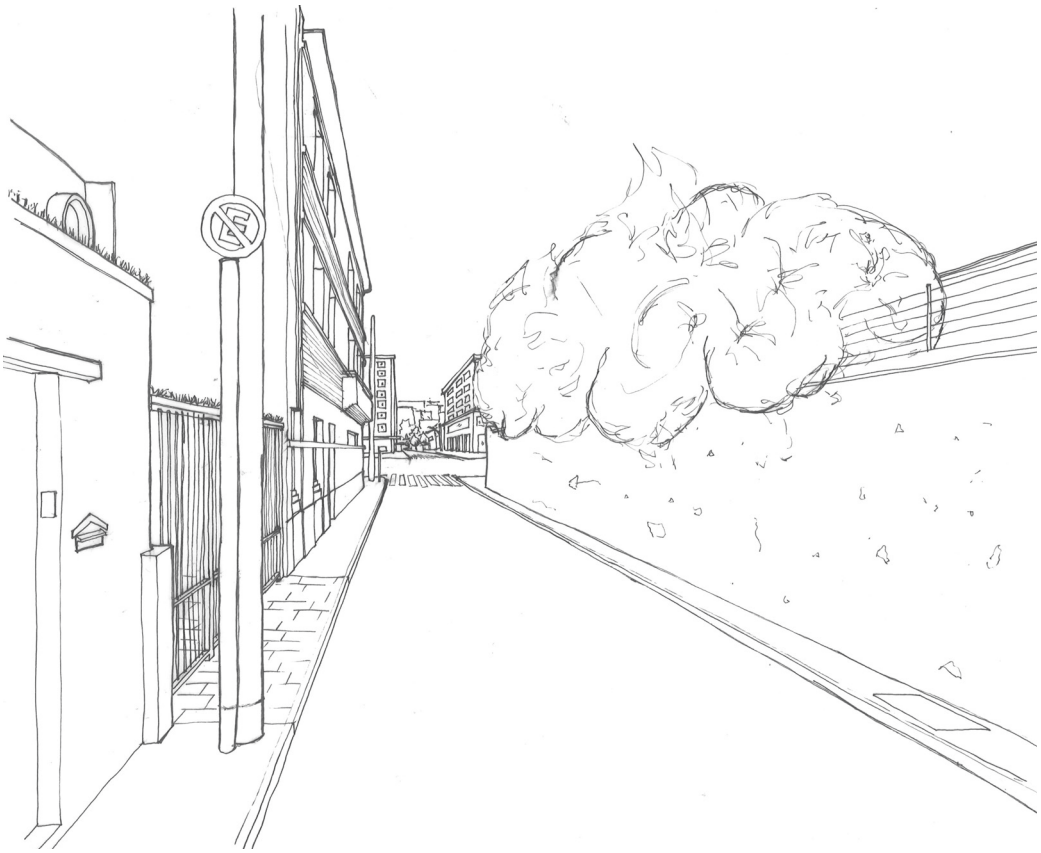
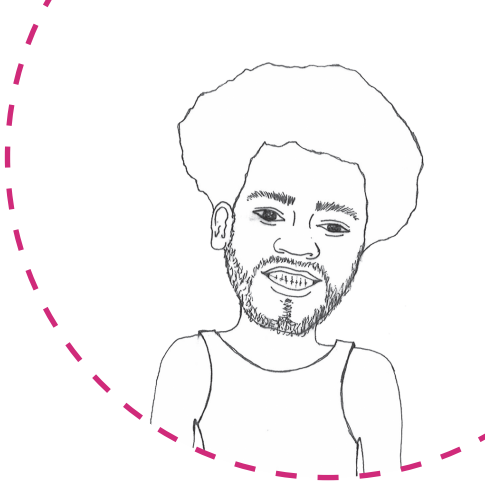


FIGURE 45 | Perspective: Southwest Corner (R. Vicente Prado & Av. Brigadeiro Luís) (Author, 2019)

Figure 45 shows the corner of R. Vicente Prado and Av. Brigadeiro Luís A. The current narrow street mostly due to individual appropriation shows a long wall covering the heritage villa that is inaccessible to the public. Higher division and isolation between adjacent properties can increase sense of insecurity, lack of belonging and hinder solidarity among neighbours. It is important to consider urban spaces that seek to integrate residents in the area.



Marcos

27, Male, Bartender
Home: Rua Deolindo Gonçalves, 22. Vila Siqueira (Zona Norte), Brasilândia
Visits: SP
Transportation Mode(s): foot, bike, car

Commute and Photo Log

Marcos' routine differs from all of the other interviewees because he does not have a regular schedule. During the days he logged, distances between destinations varied. In the interview, he stressed the lack of a proper transportation system in his municipality (Brasilândia) making the residents travel more by foot or bicycle. Most of his activities involved hanging out with friends, playing football and working sometimes. During the days he logged his mobility was mostly covered by bicycle (20km), bus (13km) and walking. Marcos mentioned the lack of safety in the periphery –his home area- involved many restrictions for them including a limited walking radius of about 500m. This radius said to be part of a culture imposed by the community itself where they can only trust their closest neighbours or family members.

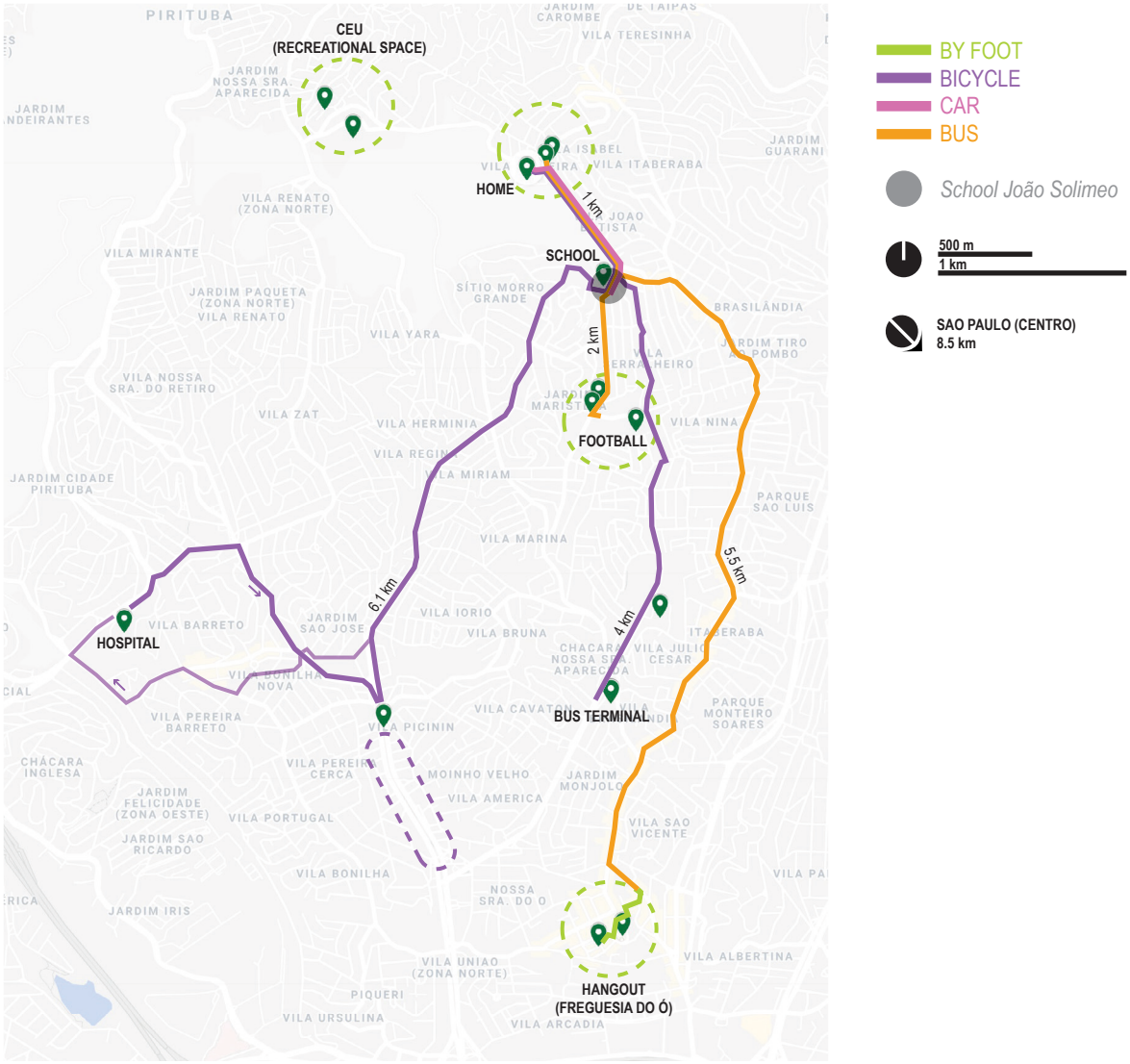


FIGURE 46 | Marcos' Route
(Author, 2019)

Some of the times Marcos biked were functional and some recreational. He would refer to it as a way of hanging out with his friends as well. They preferred to bike at night because traffic would be less making a safer place for them as cyclists. One of the highlights during the interview was the kite battle happening by Marcos' old school. Picture 18 in the photo log shows the battle leaving a "spider web" look on the electric posts. Strong winds were mentioned by him as one of the advantages to his area of residence for flying kites although also implied colder temperatures during the winter.

Marcos did not visit SP's centre during his logged days so that area was left out of the geographical delimitations, direction and distance are marked for reference in figure 46. It is a challenge for Marcos to go to the centre because there are no trains or metro stations nearby him. His trips need to be by bus and the schedules run only between 5h to 23h. Uber and taxi were also mentioned as an alternative but he said these modes were not feasible on a regular basis given the high cost.

In terms of law enforcement, Marcos described the police as a deterrent to safety and peace in the neighbourhood. Profiling is a problem because the police does not know –or seems interested- on details when patrolling, so if a group of friends is seen partying in the street they are often broken up. If the individual is black, tattooed and male, he is more likely to be apprehended by the police even if no infractions have been committed.

FIGURE 47 | Photo Log Highlights, Marcos
(Complete Photo Log for all Interviewees in Appendix)

Marcos described Brasilândia as an abandoned and precarious place where there are not investments or significant changes in infrastructure coming from the government. People take care of their own properties and families, in a sense the community size is limited by these small familiar circles. He also mentioned the lack of “things to do” so to occupy their time (i.e.: him and his friends) they make bbq’s in the street. During these events, they smoke, drink and dance. Unfortunately, these happenings are often broken up by the police if found when patrolling.

Mobility Experience

As the interview process evolved, Marcos’s case became much about the delimitations of the area in terms of sense of community and precariousness of the built environment. As mentioned by him, in a situation where people are uneducated and poor they cannot blame specific individuals for all misfortunes. His positive response to the kite battle shows an event with the potential of fostering community building -could the 500m safe zone extend by annexing itself to recreational activities? Could new activities form a “safe zone” network?- Improving the micro-mobility in the neighbourhood could definitely increase levels of trust and safety for the residents. The place by Marcos’ old school João Solimeo -where these kite battles take place- could become an important centre in the neighbourhood based on these events.

6| DISCUSSION

6 | DISCUSSION

6.1 | LINKING THE MACRO- AND MICRO-ANALYSES

In Chapter 1, the discrepancy between job distribution and population density was mentioned. Later in chapter 5, mobility issues at a regional scale further stressed SP's centrality in terms of accessibility and economic development that is almost reciprocal to population density being highest in the periphery. A suggestion to alleviating the congestion in SPMR could be to harvest the various knots (i.e.: mini centres) in other parts of SPMR with jobs and services. This way the mobility network would be spread and demand would begin to level out between various municipalities. Nevertheless, this type of planning does not address quality of transportation. Focusing in the micro-scale (i.e.: individual urban experiences), transit spaces have the potential to bring back local cultural value to the city. The following subsections will illustrate a correlation between the chronological research, regional studies and the experiential quality of the urban space according to the interviewees.

Capitalization of Public Transportation

Six out of six people interviewed used public transportation one way or another. The consensuses among interviewees were deficiencies on the reliability of the system and issues of over crowdedness. Present issues could be linked back to ¼ of SP's public system management change to a private company in 1993. As mentioned in the transportation timeline (section 4.2), during this privatization process revenue for the transportation system began to be measured by square meters per passenger and not by distance travelled. Privatization of a public service leads to prioritizing capitalization over other development goals for that service. Non-economic values are superseded by economic incentives where passenger comfort, better time travel and vehicle maintenance are no longer prioritized.

Privatizing transportation in the city directly affects low-income populations as their mobility options become limited and subject to their own economic solvency. The maps on figures 48 & 49 show a direct correlation between income and trips per day. From the aforementioned is easy to see more income implies more travel.

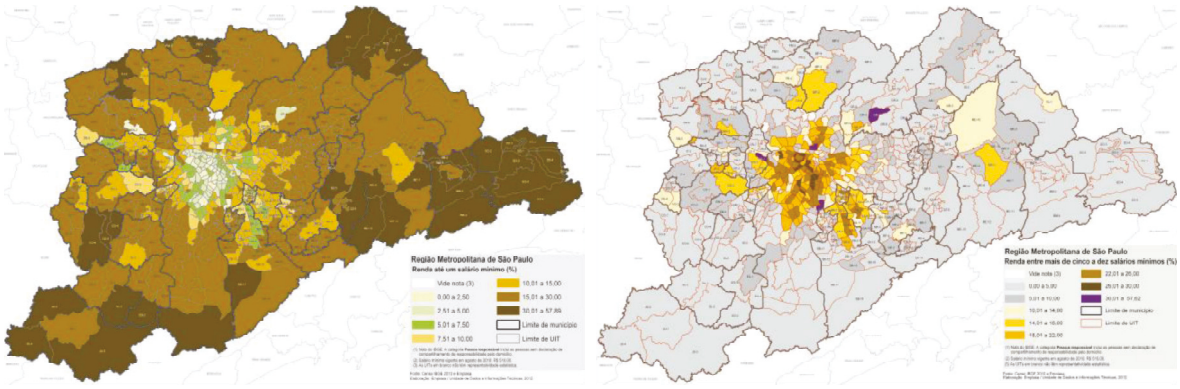


FIGURE 48 | SPMR Income Map
Families with 1 minimum income (Left), Families with 6-10 minimum incomes (Right) (EMPLASA, 2016, p. 34,35)

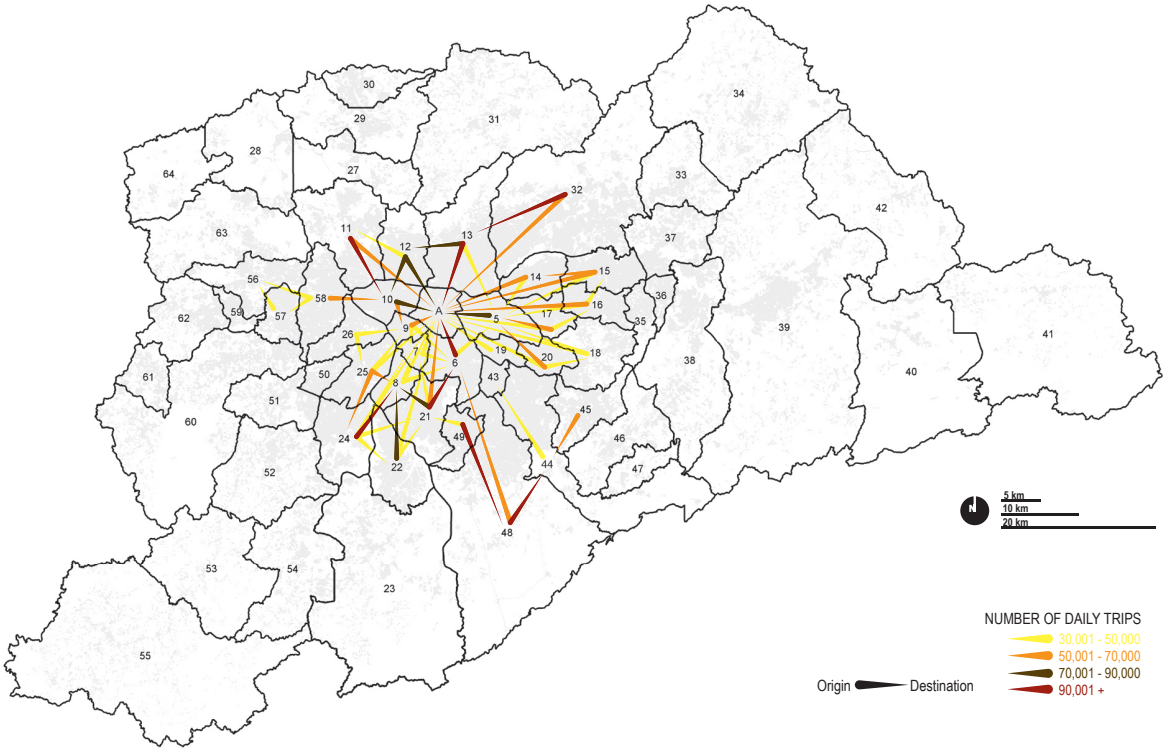


FIGURE 49 | Number of Trips per Day in SPMR
Illustration by Author (2017) based on Pesquisa Origem e Destino 2007 (metrô/SP). Municipalities are listed as A (centre), 5-64. A full list of names are part of the raw data and can be accessed if needed.

The Organic City

Despite late efforts to integrate and reconcile irregularities in city planning during 1990's, configuration of the elite versus informal cities had already began 15 years prior. Pronounced social stratification further deepened the cultural differences between demographic groups. Marcos –the only interviewee living in former favela Brasilândia- openly expressed his feelings of exclusion through deprivation of services and precarious infrastructure in his neighbourhood. In addition to this, Marcos was the only interviewee completely lacking transportation for ¼ of the day (between 23h-5h).

Bruna –just as Marcos- lived in a peripheral municipality (i.e.: Caieiras) however, her neighbourhood counted with more developed infrastructure. Caieiras has a train station that even though is quite crowded when commuting; it is able to offer better connections to SP than from Brasilândia (i.e.: buses only). Nevertheless, Bruna also mentioned issues of reliability with the train. Both interviewees' home neighbourhoods differ although are also equally a product of the organic development of SPMR where one community started to develop by itself illegally (i.e.: Brasilândia) and the other sprawled out of a pre-established knot via regional train station (i.e.: Caieiras). For different reasons both Bruna and Marcos expressed feelings of insecurity when transiting the streets by foot. Bruna said to rely on the "protection" of her car while Marcos walked only in a small "safe" perimeter of 500m.

Typologies organically evolving from the city have been the vastly horizontal periphery versus the predominantly vertical centre. Whether or not the peripheral municipalities in SPMR have attained normal levels of services and infrastructure, their development mainly consists of single-family homes at 1 or 2 stories. SP on the other hand has plenty of high-rise buildings –many of which are high-end or abandoned- with medium-sized buildings nearby the city's industrial voids (i.e.: Leonardo & Ana's homes).

Access to Services & Facilities

It was demonstrated via mobility tendencies (section 5.1) the peripheral northwest corner of SPMR –as well as other peripheral areas- is becoming its own centre and is in much need of better services and accessibility. At a regional scale is not possible to generalize a particular type of urban development –or urban experience for that matter- however, research shows predominantly low income demographics residing in these areas (EMPLASA, 2016, p. 34), higher population density (EMPLASA, 2016, p. 31) and younger demographics than SP's central area (EMPLASA, 2016, p. 32,33). Statistical analyses evidence the lack of attention higher levels of government give to these areas despite of the need. As an extension of these conditions, one could begin to lay out assumptions on how it translates into the life quality of those living in the periphery.

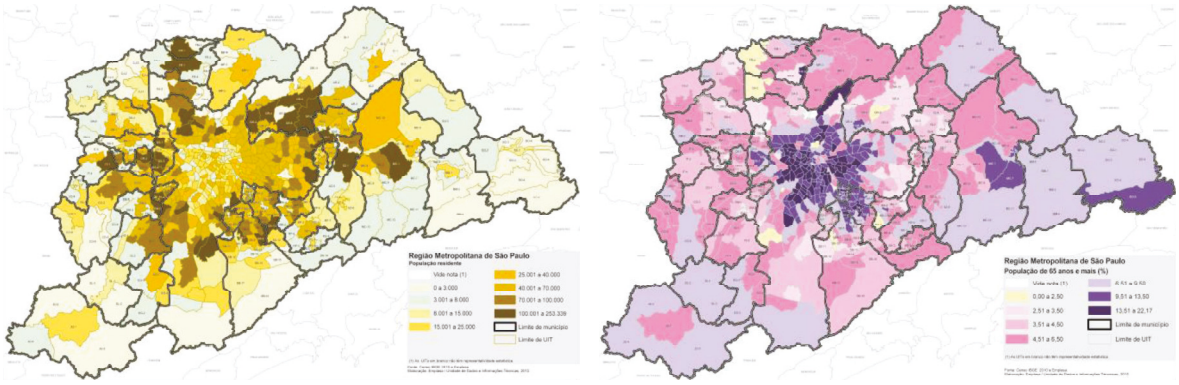


FIGURE 50 | SPMR Population Density (Left) & Population Over 65 years old (Right) (EMPLASA, 2016, p. 31, 33)

Bruna's main source of mobility, for example, was driving her own car. Fortunately, she has the means to afford more expensive mobility options than many other populations. Nevertheless, her personal desire to integrate with society becomes second to her need to move about the city in reasonable time and comfort. Marcos, on the other hand, expressed the deprivation of "things to do" as an issue since they cannot access other areas of the city without a significant investment in transportation (ex.: taxi or private car) or time travel. According to a UN-Habitat survey comparing proximity of services for those living in informal housing (i.e.: favelas & cortiços) versus those who did not; formal housing has about 11% more recreational and cultural centres, 10% more parks, 18% more hospitals and 13% more police stations (United Nations Human Settlements Programme (UN-HABITAT), 2010, p. 61). These statistics resonate with Marcos testimony of police officers who "did not seem to care", perhaps their actions are also a reflection of the lack of resources available to them despite serving an area more densely populated and with higher crime than areas with predominantly formal housing.

Open Public Space

Bruna and Marcos' testimonies are contrasting to Leonardo, Antônio, Ana and Thiago. Due to Leonardo and Antônio's proximity to their destinations –no more than 10km- they can opt to cycle in the city which was described as a favourable experience by both despite that lack of proper infrastructure. Cycling interests' conflict with the protagonism of motorized vehicles and its internal battle for network developments (i.e.: private vs. public transportation). As SP's centre started to densify and verticalize in 1920 streets (i.e.: open public paths) became narrower as roads became wider. Proposed beltway model by Prestes Maia in 1930 and Robert Moses urban superhighways plan in 1949 gradually stepped down sidewalks to lower levels of priority for city development.

Thiago and Antônio –the former living in central SP and the latter on the south area outside the centre- explain high discomfort for the quality of sidewalks outside of "noble" areas. They explain their pedestrian experience

as contrasting when traveling to different neighbourhoods in the city. As supported by Jonas De Vos' study on travel modes, satisfaction levels raise when the preferred travel mode is used (De Vos, 2018, p. 271). A city network of transit spaces designed for its travellers has the potential of increasing engagement between different populations and further improving the value of such streets through citizenship and place-making (Francis et al., 2012).

FIGURE 51 | Sidewalks
Neighbourhoods Left to Right: Rua Oscar Freire (Thiago, 2018), Avenida Jabaquara (Antônio, 2018), Street by Marcos' home (Marcos, 2018). We can see various forms of decay in terms of sidewalk maintenance from the pictures taken above. Poorer neighbourhoods have less space for sidewalks and worse quality than wealthier neighbourhoods.

The metro network managed to reinforce the centrality of the historical area of SP in 1970 but urban planning policies have not managed to accommodate for the enormous people flow. During his interview, Antônio mentioned issues of people transiting inside some metro stations. He highlighted after line-4 (yellow) opened, Luz station –most central in SP- became much more crowded than usual during rush hours. Ana mentioned also traveling to the centre (i.e.: Brás) during a "slow day" (i.e.: Saturday) as a more positive experience further hinting at the high activity level in the area during workdays.

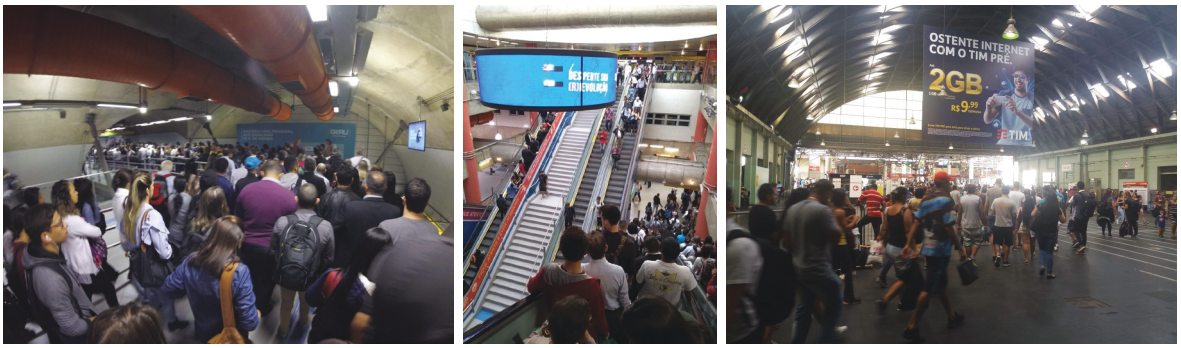


FIGURE 52 | People Flow
Metro Stations Left to Right: Paulista-Consolação during rush hour (Leonardo, 2018), Luz during rush hour (Antônio, 2018), Brás on a Saturday (Thiago, 2018). It is evident there are large amounts of people utilizing the metro service daily. If there are issues already for users' circulation during normal working times -as mentioned by Bruna and Antônio- one could only imagine how these deficiencies could become fatal in case of an emergency.

7 | CONCLUSIONS

7 | CONCLUSIONS

7.1 | CULTURAL VALUES

SP is an example of typical power dynamics between conflicting systems and agents involved in urban development in global cities. A collective sense of insignificance from individuals within the bigger context is worsened by "one-size-fits-all" solutions that divert from embracing cultural values at an urban scale. As presented by Harvey, "…individuals seem caught, helplessly passive, imprisoned and fragmented within a web of urban life being constructed by agents of power that seem far away" (Harvey, 2000, p. 9). A different way of looking at public participation can direct planners for city building that is not only democratic but also sensitive to qualitative solutions focused on user experience.

Development of inclusive public spaces in the city suffer from quantitative generalizations employed in conventional top-down planning approaches (Rebernik et al., 2018, p. 196). Learning to identify key cultural values increased my sensitivity for user experience linked to the quality of urban spaces. Even more rewarding was to hear from some interviewees the photo log exercise made them more aware of their dependency on a certain type of vehicle and their engagement to certain spaces.

Addressing the quality of transit spaces through individual experiences, changes the question from "how fast?" to "how it feels?" This level of abstraction requires profound studies on people's well-being. My hope is to shine a light on the importance of user's perceptions within the urban scale and acknowledge lack of locality (i.e.: cultural value) affects people's lives. If transit spaces begin to embrace the different cultural values of the population, there's no doubt quality would become a priority for transportation in cities. Working with this topic made me realize how important it is for people's well-being to live in an environment that can contribute to their freedom, safety and joy. Researching and understanding the micro-scale (i.e.: people's experiences) can contribute to healthier cities and citizens.

7.2 | LESSONS LEARNED

Interview Process

For the proposed interview process to be successful, it was crucial to have a basic social network on site. In my case, I was fortunate to spend 7 months in Brazil during an exchange that made it easier to form such network, note down observations and expand on local knowledge before beginning the thesis. I would like to emphasize interviewees do not need to be part of this initial network for the process to be carried through -although it eases the qualitative data gathering process-. In my case, 2/6 interviewees were people I had not met previously. These two people were an extension of the network I built which means –in the case of SP at least- people are willing to talk and share their experiences.

Data Analysis

Qualitative data was difficult to assess and analyse given my lack of experience. Most papers I encountered on qualitative research methods would explain their processes in general and right away present their results and conclusions which gave me fewer tools for learning to assess qualitative data. Methodology for qualitative data assessment was mostly found in books or doctorate thesis (ex.: Cunha & Moreira), not articles.

Assessment of quantitative data was straightforward and clear. Constructing SP's historical timelines was of great help for composing a general view of the issues although in actuality this was done after the statistical data was gathered and analysed. Regional maps for SPMR were generated from raw data tables obtained from Companhia do Metropolitano de São Paulo. Exercises assessing this data were part of a course taken at USP during spring 2017 on transportation planning. Without a doubt, the initial assessment of this data was a pillar for the development of this thesis.

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8 | REFERENCES

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9 | APPENDIXES

9 | APPENDIXES

To: **[Name]**

Collaboration Letter | Carta de Colaboração

Thank you for considering participating in this master thesis research. The present letter is to inform you of the objective of the study, process for collaboration and handling of personal information.

Objective

This thesis explores the interaction between the built environment and people through the dynamics of movement from daily life. The aim is to lead a highly qualitative study to gain a close understanding of individual perceptions of the city while interacting with its most used public space: the street. This study argues we interact with the city the most while travelling between places, therefore considering movement and time as important layers to our perception of the built environment. Lastly, this will be a study heavily based on remote collaboration making the methodology used valuable for others working with projects internationally.

Process

The collaborator will be taking 5 pictures per day for one week (any given days of the week) of their daily journeys in Sao Paulo. These pictures will be shared with the researcher and an interview through a webcam will be scheduled within the following week. In this meeting we go through all the pictures taken by them and evaluate criteria for the physical elements and augmented reality of the spaces (duration 2 hrs). This information will be synthesized by the researcher and used for the proposal of new urban designs. As this is a longer term project, scheduled to finish in October 2018, short meetings with the collaborators could

Muito obrigada por sua participação nesta pesquisa de mestrado na Universidade Aalto, Departamento de Arquitetura. Esta carta tem o propósito de informar-lhe o objetivo, processo de colaboração e manejo de informação pessoal.

Objetivo

Esta pesquisa explora a interação entre o contexto urbano e as pessoas mediante a dinâmica dos deslocamentos cotidianos delas. A abordagem altamente qualitativa servirá para aprofundar o conhecimento das percepções individuais da cidade e seu relacionamento com o maior espaço público: a rua. Esta pesquisa faz um discurso de interação humana com a cidade através de nossos deslocamentos, por enquanto considera movimento e tempo como capas importantes para nossa percepção do contexto urbano. Além do mencionado esta pesquisa dependerá da colaboração a distância. A metodologia utilizada aqui e uma ferramenta de grande valor para futuras abordagens internacionais.

Processo

O participante tirará 5 fotos por dia, por uma semana, do seu trajeto diario em São paulo (pode ser qualquer dia da semana). Estas fotos serão compartilhadas com a pesquisadora e após uma semana teremos uma entrevista pela webcam. Nesta entrevista falaremos das fotos e desenvolveremos um critério para avaliar os elementos físicos e realidade da rua (duração 2 hrs). Esta informação será processada pela pesquisadora e utilizada para novas propostas urbanas. O projeto finalizara em Outubro de 2018. Além disso, encontros curtos entre o participante e a pesquisadora podem acontecer

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be possible once a month depending on their level of engagement. There will be a 2nd intensive interview to show the proposed urban spaces and gather new insights from collaborators. Finally, during a 3rd meeting we will discuss the added layers presented by statistical data (data sharing & mobility) combined with our qualitative data of the places studied.

Handling of Personal Information

The collaborator has the option of disclosing or not their personal information (name, age, gender, profession, residential district) after publication. If they choose not to disclose their identity, the name will be kept secret. For the purpose of the quality of data gathered, the webcam interviews should be recorded either audiovisual or audio, however these will not be disclosed with the publication. Some of photos taken by the collaborators will be used for the study and will serve as base for visualizations of the proposed spaces.

Depending on the outcome of the collaborations, this exercise could serve as a way to empower, create awareness or give resolutions to social groups regarding the design of the built environment. Furthermore, depending on the reach, the final outcome could provide insights in future planning policies and/or be presented to government officials who are looking into city development potential.

Most sincere thank you for participating in this study,

dependendo do nível de engajamento do participante. Uma segunda entrevista acontecerá para mostrar a nova proposta urbana e receber feedback. A terceira entrevista servirá para conversar da "realidade aumentada" através da combinação de dados estatísticos (quantitativos) e qualitativos.

Manejo de Informação Pessoal

O participante tem a opção de publicar sua informação pessoal junto com a publicação da tese (nome, idade, gênero, profissão, residência). Se o participante gostaria de manter sua identidade anonima, o nome será omitido ao final. Para manter a qualidade dos dados obtidos, as entrevistas serão gravadas pelo audio (e visual, se possível) porém, as gravações não serão publicadas. Algumas das fotos tiradas pelos participantes serão utilizadas para a pesquisa como base das visualizações dos espaços.

Dependendo do resultado, este exercício pode servir para empoderar, criar consciência ou dar soluções para alguns grupos sociais enquanto o contexto urbano deles. Além disso, o efeito da pesquisa podera trazer insights para o planejamento de reformas futuras ou ser apresentada as prefeituras interessadas no potencial de desenvolvimento dessas áreas da cidade.

Muito obrigada por sua participação!

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Guiding Principles:
How will it be configured?
What will be connected to what?
What is the best and least obtrusive way to ask about it?
Why or how they took the photo? Is there something they are trying to say?
What are the assumptions, companion terms, interrelationships of the term? (keyterms)
Take metaphors at face value, what is implied in the choice of words?
Account for "residual themes" and any prevailing themes for each interview

BIOGRAPHICAL ELEMENTS

How long (minutes) is your commute per day?
Do you always take the same route?
What's a comfortable time (minutes) for you to walk/cycle/drive per day?
Do you prefer open or crowded spaces? Noisy or quiet?
What is a public space to you?
What is a private space to you?

Towards the end:
Where did you grow up?
What is sustainability to you?

PHYSICAL ELEMENTS

Geography & Climate
Weather? Rain, Sun, clouds, wind, humid, dry, cold, smog, dirt…
Was the road flat or with a slope? Was it steep? What is the surface like (materials/condition)?
Is there enough shelter? (ie: shadow)

Culture
Polarization - Are all sorts of people allowed/welcomed in these spaces? Is it socially diverse? How's the street life?
Communication - Can anyone comfortably navigate through these spaces?
Power dynamics – are there hints of social isolation or inclusiveness?
Icons – are there distinct, or inherent, elements of the street that would make you recognize it?
Resilience - Do you feel the neighborhoods –or streets- you have visited are any different than before? 5, 10, 20yrs ago…

Street
What type of street is it? Avenida, Rua, Marginal…
Can you describe the landscape/scenery?
Space distribution between road users - Is there enough space for walking? Cycling? Driving?
Are there layers to the street? Are these fluid?
Are you free to move about the space? Is it accessible?

RED – NOTE ON REFERENCE
BLUE – TOPIC OR AREA COVERED

Did you spot rest areas or designated waiting spots? (Ie: Benches, bus station)
What are the probabilities of traffic accidents? Blind spots? What are the speeds?
Is there enough lighting at night?
Built up – Did you spot many signs, ads, boards, maps or any particular elements of the street meant to communicate with passersby?

Landuse & Transportation
Political geography – has it been a challenge to boost the infrastructure development for these spaces?
Are you aware of any policies in place pertaining the space? your transport mode? quality of ridership?
Inter vs intra municipal mobility, could you mention about connectivity and accessibility?
How do people prefer to move about these spaces?

Cost
How many resources were required for these spaces? (materials, money, energy, workers...)
How long did it take to build them? Streamline them?
What are the maintenance implications?

LIVING SPACES

Activities
What is happening with others and around you? (present moment)
What activities could be supported in this space? Can you name a few? Are there any prohibitions? (ie: play, dance, commerce, charity, preaching..)
How are people utilizing the space? Are there flexible uses to it?
Does the space get congested at any point? Does it have too few users?

Experiences
What is happening with you?
Do you recall what you were doing during your trip? (Navigating? Autopilot?)
Efficiency – how practical is it to move by this space?
Can you comment on the quality of travel/ spaces?
Can you describe the sounds in the spaces?
Can you describe the smell in the spaces?
How far can you see in this place? Are there many visual obstructions?

Emotions
How did you feel in that moment? Would this change if it was day/night?
Do you feel safe in that space? When? How?
What are your thoughts on changing or developing the place? Does it need to be changed? Based on your gut feeling, what would be the next steps?

RED – NOTE ON REFERENCE
BLUE – TOPIC OR AREA COVERED

NETWORKS (need statistical data on this)

Data Sharing (peak use, modes, connectivity)

Mobility (peak hours, modes, densities along routes followed by participants)

Modes of transportation used in SPMR

Density

Space (vertical & horizontal, levels) required for…cars, bikes, pedestrians, bus, metro (access points)

Locations

How long does it takes from point A to B? What is the route followed?

Critical points

8h14

Baixada na Mooca

8h20

8h22

18h38

Avenida Paulista

18h40

TERÇA (17.04)

8h10

Metrô Paulista-Consolação

8h22

Faculdade (USP)

19h49

20h07

20h08

QUARTA (18.04)

8h48

8h59

9h00

9h11

Praça da Sé

9h23

QUINTA (19.04)

8h39

Praça da Sé (metrô)

8h41

9h09

Jardim da Faculdade (USP)

18h09

Avenida Paulista

18h20

SEXTA (20.04)

14h40

15h28

Feria Mooca

15h28

15h29

15h30

SÁBADO (21.04)

11h52

11h56

12h04

19h28

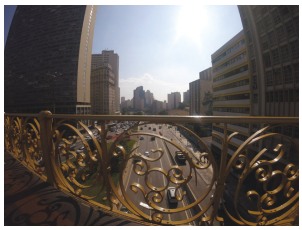
19h30

DOMINGO (22.04)

8h59

Viaduto São Carlos

9h25



9h32

9h35

9h56

SEGUNDA (23.04)


Predio Caio


Feria Livre


Ônibus Santana - Cidade Universitaria


FAU

Ônibus

Manhã, de casa para FAU (ônibus)

TERÇA (24.04)


Praça da Árvore


Primeira Verde


Primeira Amarela

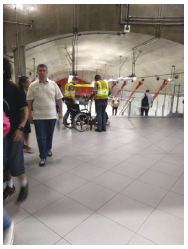

Butantã

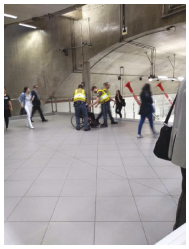

Circular

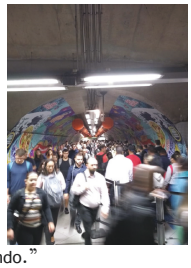
Metrô

Manhã, de casa para FAU (metrô e circular)

QUARTA (25.04)





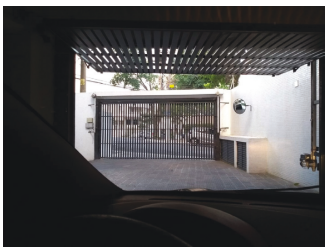


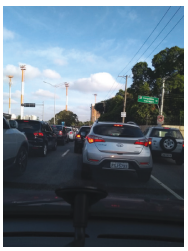
"Nos horarios de pico os trens ficam mega lotados mas tb é nessa hora que tem bastante funcionario trabalhando."

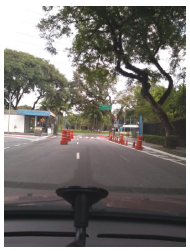
Metrô

Manhã, de casa para FAU (metrô)

QUINTA (26.04)




Av. Dos Bandeirantes



Carro

Manhã, de casa para FAU (carro)

SEXTA (27.04)


Portão 1 USP


Ponte Pinheiros


Av. Faria Lima


Av. Hélio Pellegrino


Av. Indianópolis

Bicicleta

Manhã, de casa para FAU (bike)

SEXTA (04.05)

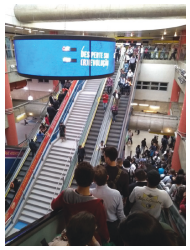

Ponto de ônibus

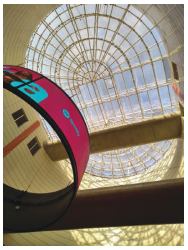

Av. Paulista

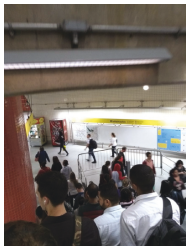
Ônibus

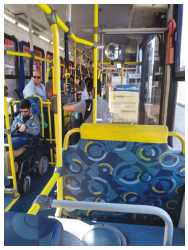
TERÇA (08.05)


Luz







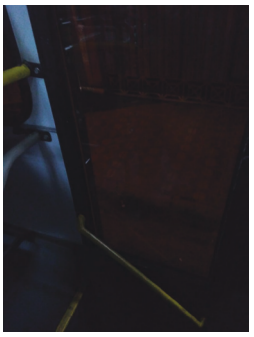

Circular

Metrô e Circular

Manhã, de casa para FAU

QUINTA (10.05)

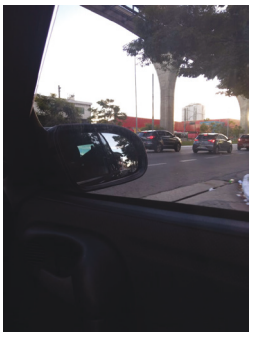


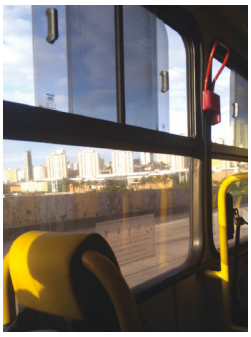
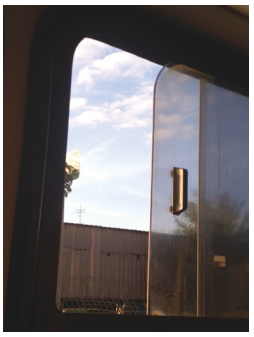
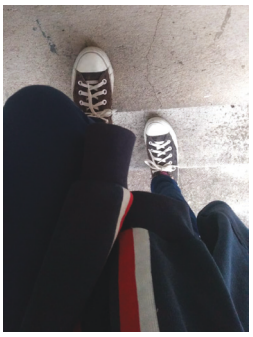




7h | 7h | 7h | 18h | 18h30

Av. Prof. Luiz I. Mello | Chegando em casa

SEGUNDA (16.04)



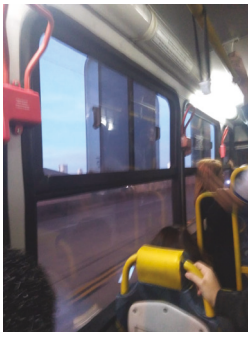





7h | 12h30 | 17h30 | 18h

Ônibus à segunda escola | Chegando em casa

TERÇA (17.04)



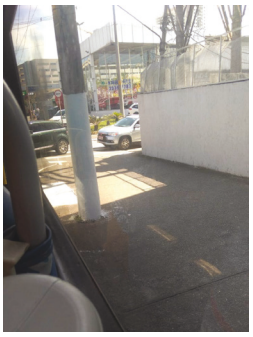
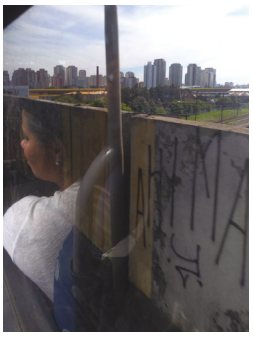



12h30 | 18h

Ônibus à segunda escola | Chegando em casa

QUARTA (18.04)

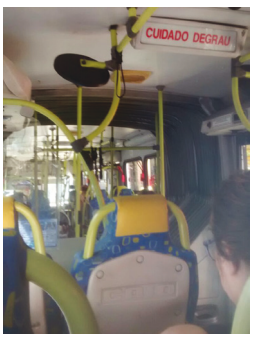


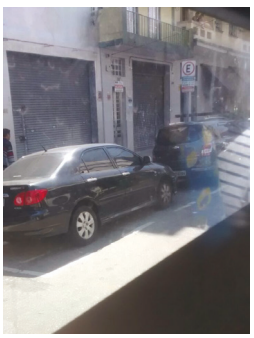
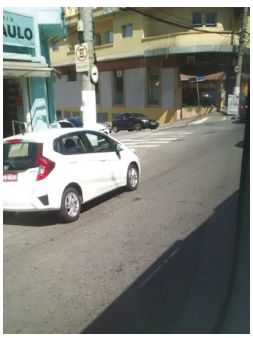




7h | 12h30 | 18h

Rua Marcelo Muller (Saindo de casa) | Ônibus à segunda escola | Chegando em casa

SEXTA (20.04)


15h | 15h | 17h

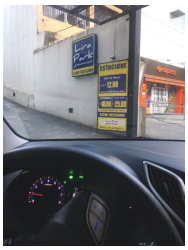
Ônibus à Brás

SÁBADO (21.04)


5h50 - 6h30


Pedagio


Llegando em SP


Estacionamento

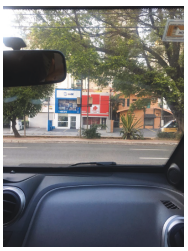

Caminhando até a padaria

Manhã

QUARTA (18.04)


10h10 - 11h

Manhã



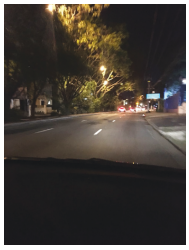

Mackenzie (Universidade)

Tarde

QUINTA (19.04)


Almoço

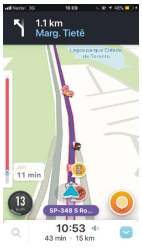

Tarde


23h - Voltando para casa

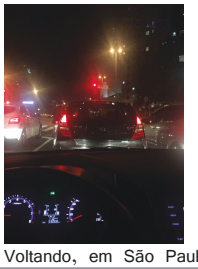
Noite

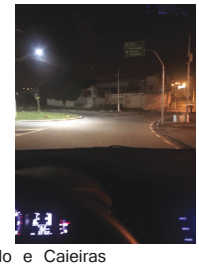
SEXTA (20.04)


10h



Manhã




Voltando, em São Paulo e Caieiras

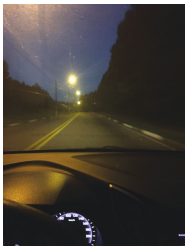
Noite

SEGUNDA (23.04)


Dia em Caieiras e academia

Manhã

TERÇA (24.04)


6h - 6h50


Chegando em São Paulo


Marginal Tietê


19h - Voltando para casa

Manhã

Noite

QUARTA (25.04)


8h50 - 9h50


Desde a CPTM Caierias até na FGV na Paulista (1 trem + 2 metrôs)


Indo para Mackenzie

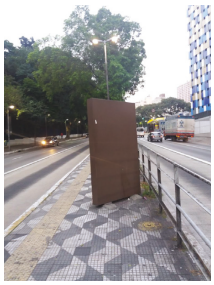
Manhã

Tarde

QUINTA (26.04)

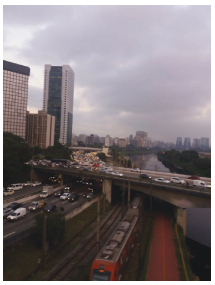
PHOTOS - BRUNA

6h20
Alameda Lorena



6h24
Avenida Rebouças

6h36

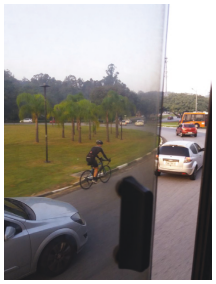


17h36
Marginal Pinheiros

17h40
Largo da Batata

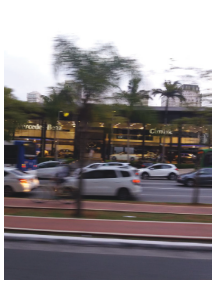
TERÇA (24.04)

6h40
Avenida Rebouças



6h50
Cidade Universitária

6h55



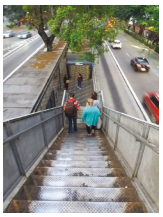
17h31
Avenida Faria Lima

17h45
Rua Augusta

QUARTA (25.04)

6h19
Avenida Rebouças

6h20
(Passarela)

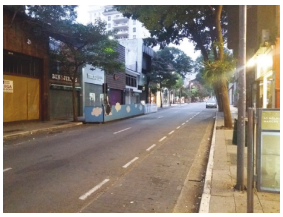


6h21

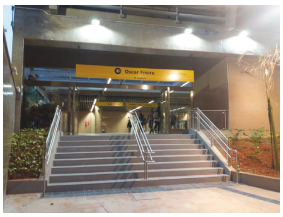
18h01
Avenida Dr. Arnaldo

18h09
Rua Haddock Lobo

QUINTA (26.04)



6h19
Rua Oscar Freire



6h23
Estação Oscar Freire do Metrô

6h25

6h27

6h27

18h42
Terminal de ônibus Butantã

18h43

SEXTA (27.04)

10h08
Avenida 23 de Maio

10h31
Estação Brás

12h24

12h30
(Metrô)

15h04
Av. Brigadeiro Luiz Antonio

15h23 (Passarela sobre Av. Rebouças)

SÁBADO (28.04)

11h17
Avenida Paulista

11h18

11h28

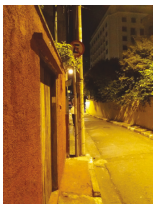
11h38

20h00 (Av. Brigadeiro Luiz Antonio)

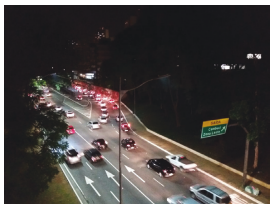
DOMINGO (29.04)

18h36
Avenida Paulista

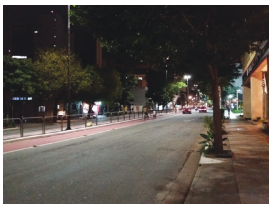
18h46



19h23
R.Vicente Prado



19h28
Avenida 23 de Maio



20h14
Avenida Liberdade

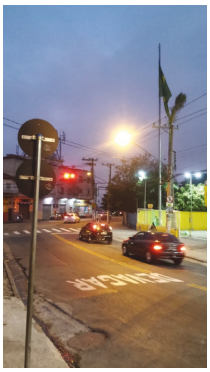
SEGUNDA (30.04)

Mercado

#1

Bairro

#2



Rua Domingos Vega

#3

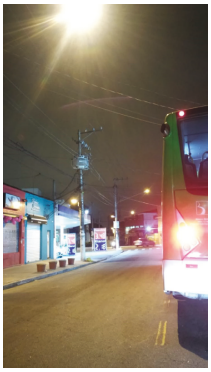
#4 **DIA 1**

Ônibus diário

#5

Padaria

#6



#7

#8 **DIA 2**

Campo de futebol (dir)

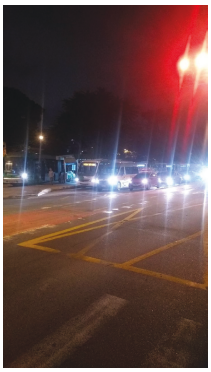
#9

Estrada do Sabão

#10

#11

#12



Passeio de Bicicleta

#13 **DIA 3**

#14

#15

Av. General Facó

#16

#17

Escola João Solimeo

#18 **DIA 4**

Casa (prédio azul)

#19

#20

Hospital (construção)

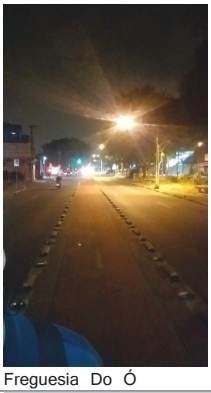
#21

#22 **DIA 5**

#23

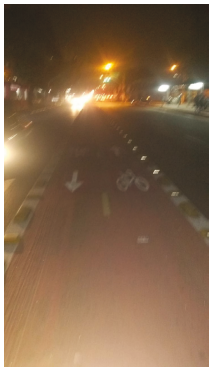
Perto do CEU

#24

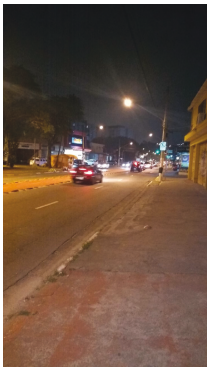


Freguesia Do Ó

#25



#26



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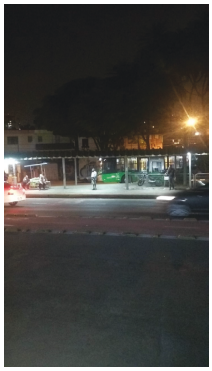

Terminal de ônibus

#28 **DIA 6**